
https://www.roadabletimes.com/roadables-vtol_avrocar.html

This is a portion of the material found in a website called "Avro Canada's Flying Saucer - The VZ-9V Avrocar Flying Disc". The vehicle was one of the earliest VTOL aircraft and was built for the U.S. Airforce. The website was the work of David Mackechnie, but that site was discontinued in the summer of 2002.

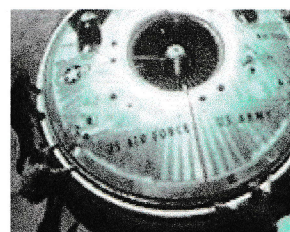
The Avro Canada Archives



Avro Canada's Flying Saucer: The VZ-9V Avrocar Flying Disc

The UFO FILES

Palmiro Campagna has woven together eyewitness accounts and secret government files, including newly declassified documents. Campagna relates some startling episodes in Canadian UFO history, from revelations made to Wilbert Smith, a Canadian Ministry of Transport engineer in Washington, D.C., to the United States' so-called "black" program, which may have originated with the Avrocar (also known as Project Silver Bug), the United States air Force flying saucer built in Canada, to the unexplained case of Stefan Michalak, whose close encounter with a strange, burning hot craft left him physically scarred!



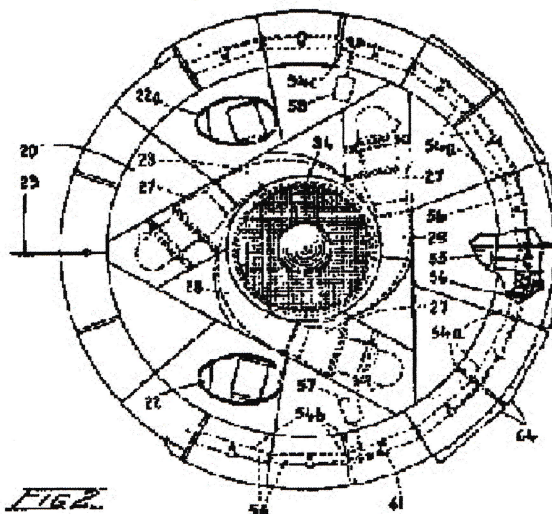
In June 1954 Avro Canada produced a report entitled "Project Y2: Flat Vertical Take-Off Supersonic Gyroplane". The report described a circular craft using conventional engines for power, with a cockpit

in the center of the craft. Intakes for forward flight were located at the top and bottom of the craft, forward of the cockpit. For vertical takeoff, intakes were located in an inner ring on the upper surface. Exhausts were located on the perimeter of the craft.

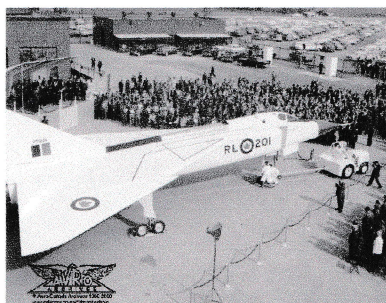
During takeoff, air would flow through slots in the upper surface of the disk to radially mounted engines which would eject their exhaust to the periphery of the craft. At this point the exhaust would be deflected

downwards by a series of vanes or flaps. This method of redirecting the exhaust by strategically placing a flap in the airstream was known as the "Coanda effect," named after its discoverer, Henri Coanda, a Romanian

engineer who had been linked to the German saucer experiments during the Second World War. The effect helped to create the ground cushion. On landing, this ground cushion would act to dampen any sudden impact. In forward flight, the same flaps would redirect the exhaust backwards with air provided from the forward-facing intakes. The craft was expected to attain speeds of between 1,720 and 2,300 mph and reach a maximum height of between 71,000 and 80,600 feet, with a capability to hover as high as 18,000 feet.



It Came From Outer Toronto...



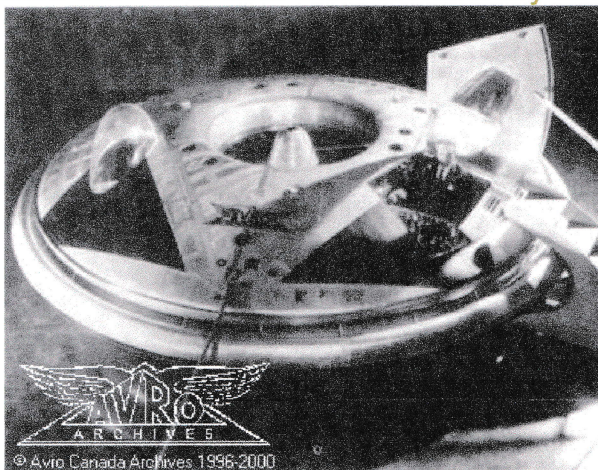
Avro Canada is best remembered for the CF-105 Arrow, the supersonic jet fighter cancelled by Ottawa in 1959. Now, newly-released CIA documents shed new light on another of the company's dreams - a flying saucer.

The year was 1952 and the Cold War was at full chill. The House Un-American Activities Committee was looking for reds under beds, and UFO sightings were spreading like an epidemic across the United States. Even Air Force pilots reported being pursued by flying saucers. The sense of dread was turning to frenzy, and the

CIA decided something had to be done.

In one of many memos on the subject, H. Marshall Chadwell, deputy head of the agency's Office of Scientific Intelligence, declared that "something was going on that must have immediate attention." He and others in the CIA were concerned that the Soviet Union was developing a secret weapon based on the "flying discs" that the Nazis had been rumoured to have constructed in the last months of the Second World War.

Recently released documents from the CIA archive are full of accounts by former German scientists of their desperate work to save the Fatherland with revolutionary circular aircraft supposedly



capable of enormous speeds. But when the CIA set up a study group in 1952 to look into the phenomenon, it discovered something extraordinary far closer to home: In Canada, British and Canadian engineers were in the process of building a flying saucer of their own.

It was called Project Y, a Canadian venture into the unknown that was, for much of the 1950s, perhaps the most secret aviation project in the West. Half a century later, the Project Y story remains a remarkable chapter in the history of aerial design, an idea that came tantalizingly close to breaking all the rules of the sky, before collapsing in bitter disappointment for lack of money and faith.

Back in the '50s, the news that Canadians were building a flying saucer set off alarm bells at the CIA. Was the United States being left behind by its staunchest allies in the race for a technological edge? And if Canada could build a flying saucer, then surely the Soviet Union wouldn't be too far behind.

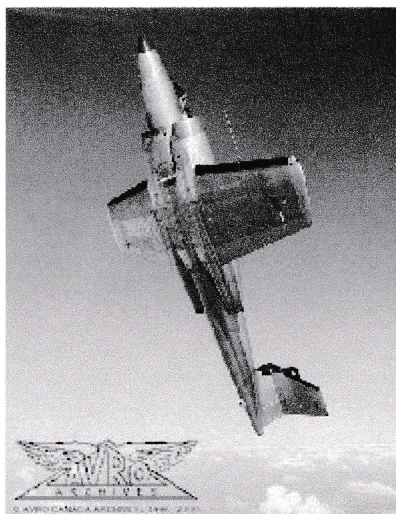


Mr. Chadwell wanted answers. The sense of urgency is tangible in a memorandum he sent in June of 1954 to his department heads, demanding reports on "the use by any foreign power or nation of non-conventional types of air vehicles, such as or similar to the 'saucer like' planes presently under development by the Anglo/Canadian efforts."

While CIA agents were dispatched to watch eastern skies for flying saucers, U.S. Air Force officers were visiting Malton, just outside Toronto, the headquarters of Avro Aircraft, a subsidiary of A. V. Roe Canada Ltd. and the British Hawker Siddeley Group.

After the war, Avro Aircraft, in Malton, Ontario was the place to be for hotshot aircraft designers fleeing Britain's doomed aviation industry. Among them was a supremely talented 31-year-old, John Frost, who had already earned a reputation for unorthodox design with the sleek de Havilland 108, a swallow-shaped research plane and arguably one of the most beautiful aircraft of all time.

Mr. Frost was brought to Avro Canada to work on the CF-100 fighter, a design he never really liked. He soon became obsessed with far more radical departures from orthodoxy. It is unclear whether he drew inspiration from the increasingly widespread popular legend of alien-piloted flying saucers skimming through the postwar skies, or how much he relied on previous research.



He would have known about the "Coanda effect," named after a French Romanian inventor, Henri-Marie Coanda, who experimented with the first rudimentary jet engine as early as 1910. He found that a turbojet would not only provide thrust; by sucking in air, it could also create a vacuum above the wing and thereby produce extra lift.

There is plenty of evidence that, in the closing stages of the Second World War, the Nazis began to experiment with secret weapons built around the Coanda effect. Among the documents in the CIA's "X-File" archives is an interview given by a German aeronautical engineer, Georg Klein, who claimed to have worked on a flying saucer under the supervision of Luftwaffe designers Rudolf Schriever and Richard Miethe.

Another document from the archives is a 1950 article written by a German émigré in Chile, Eduard Ludwig. The article, submitted to a Chilean magazine but apparently never published, was titled "The mystery of 'flying discs' -- a contribution to its possible explanation." It recounted Dr. Ludwig's wartime work at a Junkers research facility, where he helped to develop a "one-piece metal wing" functioning as a "speedily rotating top" capable of vertical takeoff and high speeds.

"The experiments turned out to be extremely difficult and involved many casualties," Dr. Ludwig observed drily, clearly rueful that the spinning-top experiments had not come to fruition before the arrival of the Red Army.

He concluded: "The future will show whether the 'flying discs' are only the products of imagination or whether they are the results of a far-advanced German science which possibly, as well as the nearly finished atomic bombs, may have fallen into the hands of the Russians."

Some of the Luftwaffe's top engineers did, indeed, end up in Moscow, while a handful, such as Wernher von Braun and Dr. Miethe, were spirited away to the West. Dr. von Braun, of course, became the father of the U.S. space program. No one seems sure what became of Dr. Miethe.

In his own work at Malton, John Frost seemed to be groping his way. He was in search of the aeronautical holy grail of the age, the vertical takeoff and landing (VTOL) craft, but he began his research on a spade-shaped craft before settling in 1953 on a disc. The original concept called for a single flat turbojet to draw in air from above and force it out through nozzles around the edge of the craft. It would be kept aloft by a cushion of air and pulled upward by the Coanda effect.

The early work was carried out in total secrecy; only a handful of Avro workers were told what was going on. "It was so secret that when Frost would come to the welding shop, he would sketch the piece he wanted on some paper and, when we had

finished, we had to put the sketch in a special garbage bag," Alex Raeburn, Avro's workshop superintendent at the time, recalls.



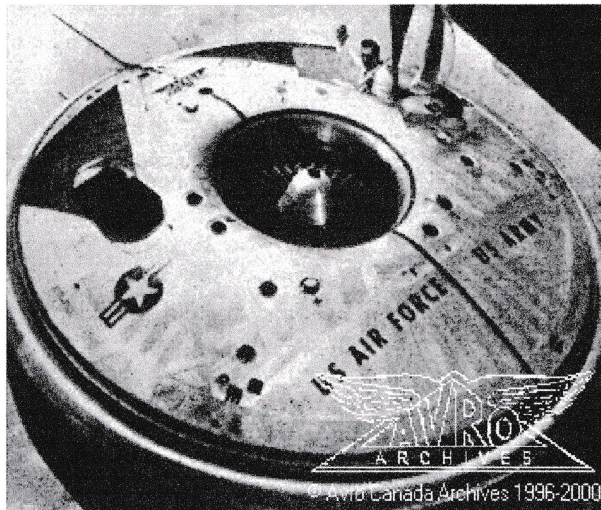
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www.odyssey.on.ca/~dmackechnie

Verne Morse, a company photographer, was made privy to the secret only once it had begun to take shape. "There was a stupid rumour going around the plant that we were building a flying saucer, and everybody was laughing about it," he says. "Then one day I was called in by security, and I was told I needed clearance because we were building a flying saucer."

"My first impression was that this was ridiculous," but when he was

taken past the guards, through Project Y's double doors, and saw the smooth metal disc taking shape, he was speechless. "It was a sense of 'Wow!' Just real awe."

But Project Y's first year was proving troublesome. The jet engine blew so hot it melted the steel structure of the craft, and its violent shaking would pop the rivets. When the U.S. Air Force officers arrived in September of 1953, the Canadian government, having spent \$400,000 on the project, was glad to hand over the reins to a bigger sponsor. A.V. Roe, having failed to squeeze funds out of the British government, also welcomed the Americans with open arms.



In 1955, Project Y became the U.S. Defence Department's weapon system 606A, and a white USAF star was painted on the prototype's fuselage. Millions were now being poured into the project, and the cult of secrecy deepened yet further.

Mr. Raeburn recalls the day in 1955 that the U.S. Navy came to take the prototype away for wind-tunnel tests near Los Angeles. "We loaded it on a flatbed truck in the middle of the night. The police shut off all the traffic right down to Toronto harbour, and they put it on a U.S. tugboat. They even had one of our men sworn in to the U.S. Navy so he could go with it, along the Erie Canal, along the New York intercoastal waterway, and through the Panama Canal."

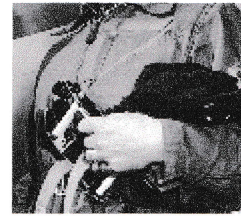
With the help of U.S. financing, Mr. Frost had redesigned the original concept, placing three small jet engines around a central fan that would suck in the air through a circular intake at the centre of the disc. The pilot would sit in a little oval cockpit to one side under a perspex bubble.

But the wind-tunnel tests suggested that secret weapon 606A had severe stability problems and was in constant danger of flipping over like a stiff pancake once the throttles were opened on its jets. Mr. Frost and his assistants tinkered away at the problems for another year, but had still not mastered them by the winter of 1960 when Spud Potocki, a former Polish air force flier, took the prototype for its first flight.



Ernie Happe, another British engineer, was one of

the few allowed to watch. "We were standing around it, and it was tethered with three cables to stop it flipping. It just went up a couple of feet off the ground, and Potocki was sitting in the cabin fiddling around with the controls, trying to make it do what it was supposed to."

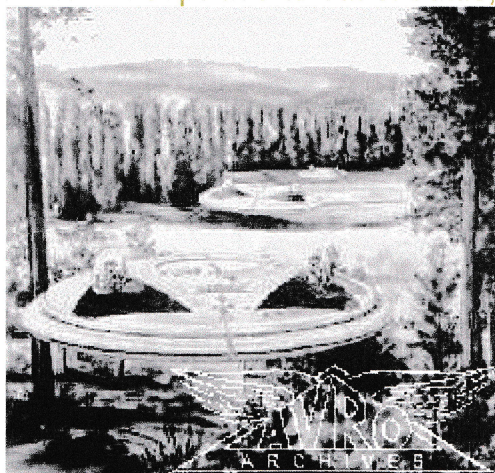


Over the next few months, as Mr. Potocki attained a feel for the delicate controls, he was allowed to roam around the Avro compound, dodging in and out of hangars. Mr. Raeburn would often look out of his workshop window and see it floating by. "He would go up and down and hover over the concrete apron and look in the doors of the hangars. I remember the wind would suck the ice off the puddles and they would float around in the air like plates of glass."



Avro's management was overjoyed to see its flying saucer take to the air. The publicity department began designing brochures to capitalize on the aircraft's boundless potential for the day when the shroud of secrecy would drop away. It was to be called the Avrocar, and it would spawn a string of civilian and military spinoffs. There would be an Avrowagon for the family of the future, an Avroangel (an air ambulance that would zip to the scene of an accident and land on the spot) and an Avropelican for air-sea rescues and anti-submarine warfare.

Ken Palfrey, a draughtsman on the project, remembers Mr. Frost's far-reaching hopes. "He was planning to make one four times as big, to move troops in and out of battle, like helicopters do now."



The giant troop carriers would lurk under the enemy radar, drop their passengers and then zip into the stratosphere before the other side even spotted them. Mr. Happe recalls Mr. Frost excitedly visualizing the craft bouncing off the upper layers of the atmosphere, crossing continents in a single bound.

The reality was more mundane. The Avrocar hovered happily close to solid ground but became dangerously unstable at heights over 2.5 metres, however much Spud Potocki struggled with the controls. The USAF wanted to fit it with a tailplane to test whether that would correct the problem, but Mr. Frost, a design purist, refused to countenance the idea. "He

wouldn't have it," Mr. Palfrey recalls. "When the Americans suggested that, it was about the only time I ever saw him angry."

Mr. Frost insisted he could fix the problems, but the U.S. military was rapidly losing interest. After spending \$7.5-million, the Defence Department pulled the plug at the end of 1961, killing the Avrocar. Mr. Frost left the country a bitter man. "He was completely fed up," Mr. Palfrey says. "It was a sad story. He was a fine guy. A gentleman."

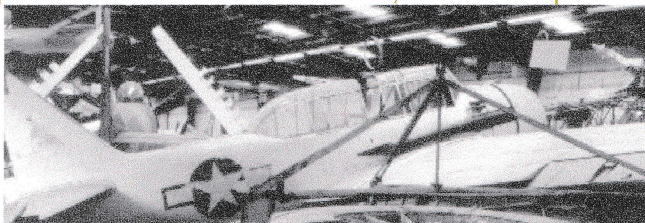
The designer ended up in Auckland, where he spent the rest of his days dreaming up gadgets for Air New Zealand, such as a hydraulic tail dock to allow engineers easy access to commercial planes. But it was small potatoes compared to the cosmic ambitions of Project Y, and the sense of betrayal was as keen as ever when he finally retired in May of 1979.

In his valedictory interviews, Mr. Frost told the local press that he had been robbed of credit for inventing the Hovercraft by Sir Christopher Cockerell. The irony was that, at Malton, Mr. Frost's eyes had been so set on the skies he failed to spot the Avrocar's ground-hugging potential. Within a few days of leaving his job, he died. He was 63.



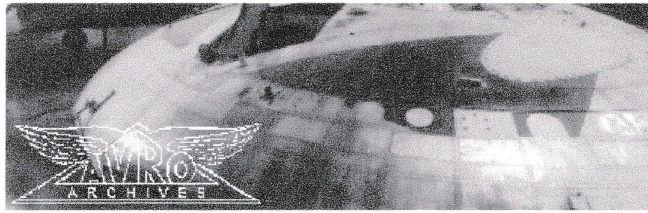
The legend of Project Y lives on in the Web pages of committed ufologists. Some speculate that it had been a stunning success, and the litany of design errors and disappointments recalled by Avro veterans was merely a cover story. Others believe the project was merely a smokescreen for the Pentagon's "real" flying saucer project being masterminded in secret bases such as Roswell, perhaps by mysterious superannuated Nazis such as Dr Miethe.

As for secret weapon 606A, the prototype is gathering dust in a corner of a Maryland warehouse that serves as a storage facility for the National Air and Space Museum. Jack Walker, a veteran pilot who shows visitors around, cannot understand why anyone would want to see it, and warns visitors not to get too

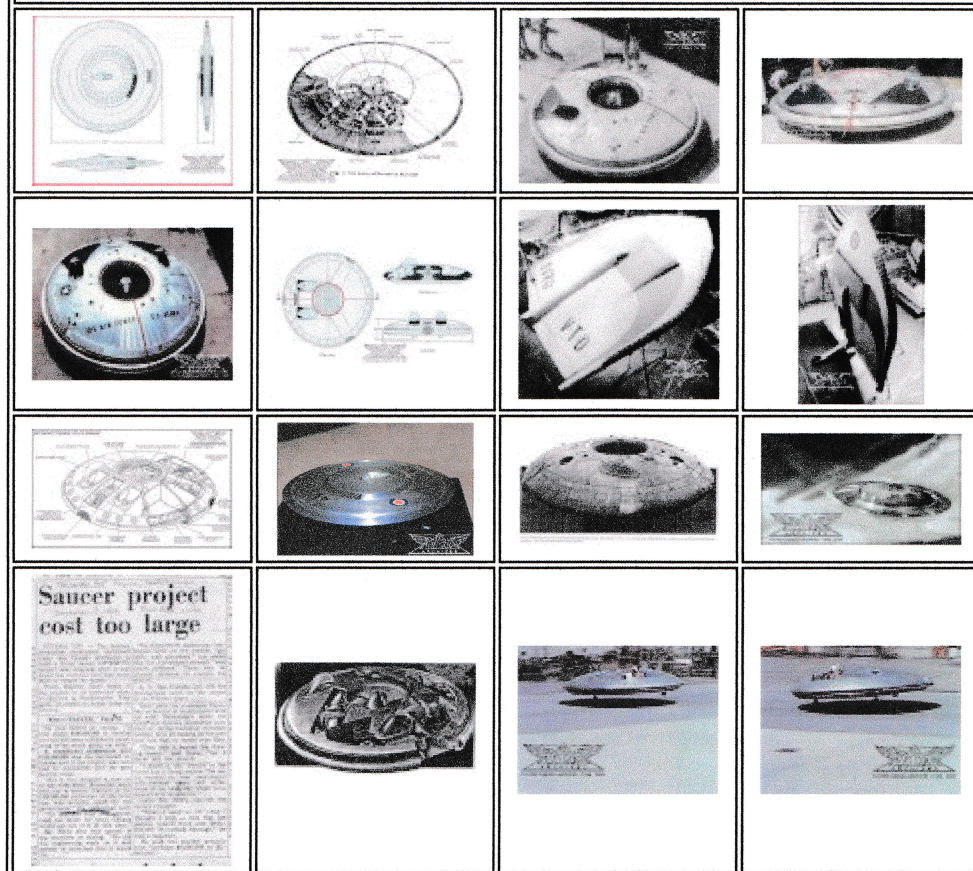


close lest they be abducted by aliens.

The burnished metal disc, about 15 metres across, is lying unsung and forlorn under the wing of a Second World War Black Widow fighter. The perspex bubble over the cabin has been removed, and its instrument panel is in a cardboard box somewhere else. But you can still see where the edges were charred in the effort to get John Frost's futuristic vision off the ground.



Picture Gallery - VZ-9V Avrocar Flying Disc



This is from the Regina Leader Post on **Friday, December 3, 1954:**

(The dates just somehow don't make sense!)

Saucer project shelved

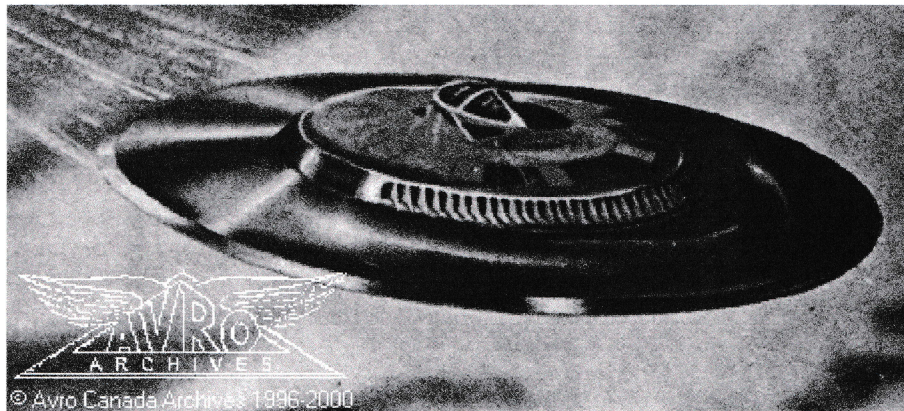
**** C. D. Howe [known as the Minister of Everything] reveals \$100,000,000 craft worthless*

LONDON (Reuters) - Trade Minister Howe said Thursday that Canadian scientists worked for about 18 months on a \$100,000,000 flying saucer project but it was finally shelved.

Howe ... said the Avro Canada firm planned the oval-shaped aircraft but finally dropped it.

"We did the engineering on it and proved to ourselves that it would fly but we did not carry it to the mock-up stage because it did not seem to have any useful purpose," he said.

"It cost about \$100,000,000 to develop and did not seem sufficiently promising to be worth going with"



AVRO Disc, 1955 Portrayal (Official U. S. Air Force Photo)

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This would appear to be an artist's rendering of a somewhat advanced version of an Avrocar!