

# Pre-Flight

10 YEARS!

A Publication of the Aerospace Heritage Foundation of Canada  
P.O. Box 246, Etobicoke "D", Etobicoke ON M9A 4X2

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## The *Jetliner*: CF-EJD-X QUEEN OF THE AIRWAYS

Some events are worth remembering, like the first flight of the *Jetliner* fifty years ago. The enthusiasm of the designated flight crew for the maiden flight of the *Jetliner*, including Avro employees not on holidays clustered on the tarmac at Malton, was not lessened by the successful flight of the deHavilland *Comet* just two weeks prior. It was as high as ever; they knew that their aircraft was a superb machine. This faith in the *Jetliner* remained firm and constant even when the first flight attempt might have to be aborted: the day was very hot and dry, and the secondary open runway was too short. The attempt was not postponed and the *Jetliner* flew into history.

Everyone was elated when the maiden flight of CF-EJD-X went without a hitch. With the exception of that one-time main gear problem that lasted barely five weeks to full correction, the *Jetliner* remained trouble-free throughout its flight test programme. This was in marked contrast to the *Comet* which was beset by one trouble after another, with tragic losses of life. However, the *Jetliner* encountered problems, not of design or

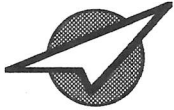
technology but of a more formidable nature. They were managerial and political, emboldened by a generous modicum of power and influence. The result: the technical portion of the equation came through, the human did not. The people in power who could decide which way it would go should have known better. Perhaps they could have taken the word of an early aircraft designer-builder who insisted, that all things being

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FOUNDED 1980

AHFC

Aerospace Heritage Foundation of Canada



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**President's mailing address:**

14 Eagle Road  
 Etobicoke ON M8Z 4H5  
 (416) 231-0438

The Aerospace Heritage Foundation of Canada (AHFC) is a federally-chartered not-for-profit organization. The current emphasis is on Avro and Orenda and the Foundation is actively trying to locate former employees of these companies.

✓ **Western Canada** – please contact:

Michael L. Bullis, 164 Berkshire Close NW,  
 Calgary AB T3K 1Z4. Phone (403) 274-7497.  
 Cash donations over \$25.00 and "gifts-in-kind" will be acknowledged by a receipt for income tax purposes. For more information on the AHFC and how to support its activities, please write to:

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**FROM THE PRESIDENT**

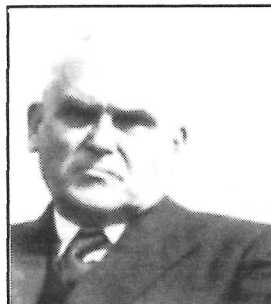
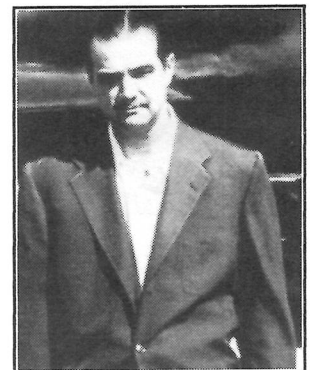
I am pleased to report that there was an excellent response to the AHFC booth at the Toronto Aviation and Aircraft Show. In fact, AHFC received requests for its presence at other shows. We made a lot of friends, spread the word and in general, made ourselves available to people who wanted more information. Much justly deserved thanks for those who spent hours manning the booth. AHFC was also present at the 75th Anniversary of the RCAF celebration at Camp Borden in April. Over 300 vets and 700 serving personnel, including Air Cadets. It was an impressive affair, with military pomp and ceremony. The Underwater Recovery Team, coordinated by Bob Saunders, has started preparations for its search in May and June. Though it's hard work, Bob and his team are determined that 1999 will be the year! I will keep you posted of the team's progress. If you are wondering what present to give to a youngster interested in aircraft, Adlin Graphics has published a booklet with cut-out of six Arrows (they glide!) and a hangar. Call AHFC for more information. That's all for now, as they say. Hope to see you at the Annual General Meeting on June 12th.

NICHOLAS DORAN

**Queen, continued:**

equal, if an airplane looked good, it would fly successfully. And the *Jetliner* looked good. It looked sharp, with white upper surfaces, bold gold stripes sweeping down each line of windows, beginning from the nose and onto the tail, and the glistening silver lower portion of the fuselage and all the empennage. The colour scheme was striking for aircraft of the day. To top it off, its name was emblazoned on both sides of the nose in red, with the striping extending to the tail. It was truly a beautiful bird to behold.

The individuals in power also could have paid attention to the performance figures, especially *Hughes wanted the Jetliner*. when the *Jetliner* flew at a speed in excess of 840 km/h on November 22, 1949. Don Rogers was in the left seat, Mike Cooper-Slipper in the right and Bill Baker was the monitoring flight engineer. Jim Floyd was an observer, of course. You can be sure that he made many spontaneous expressions of satisfaction to Mario Pesando, who was onboard with him. The design specifications followed a template from TransCanada Airlines (TCA). Yet in spite of the demonstrated airworthiness and potential of the *Jetliner*, TCA rejected it for use on its routes. By its own admission, it eventually confirmed that it could not show any inclination toward CF-EJD-X because of political implications, whatever that meant. Avro, to its credit, did not give up. From time to time, someone from Avro would drop into TCA headquarter, just in case.



Howe said, "Not to you!"

Others were more than impressed with the *Jetliner*. Dixon Speas of American Airlines quit to head an Avro Canada marketing office in New York City. He decided to contact every US airline and tell them about the *Jetliner* flying twice as fast and comfortable as anything in the air at the time. Recall too the interest of Howard Hughes and the US Air Force for its high-altitude navigational program. By early autumn, National was hooked and Avro was looking at the potential sale of at least ten *Jetliners*. United Air and Eastern were standing in line.

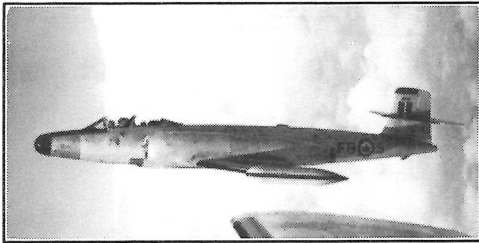
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## Queen, continued

In fact, knowing the competitive nature of air travel in the USA, Speas realistically estimated that the total run for the Jetliner could reach as high as 500 aircraft over time.

TCA did not stand by totally idle, especially when servicing of routes would prove to be a piece of cake once these would be determined. But there was the ongoing complaining about small prototype shortcomings. This was regularly abetted by baseless, carping criticisms.

It was truly an uphill struggle. The media of the the day did not help; on the contrary, they would often get their sources and facts mixed and tangled, resulting in a negative image projected before the public. The politicians were negatively active, probably because they viewed a skewed picture and did not ascertain the veracity of sources. The Department of Transport demanded as a sine qua non for any demonstration flights, that passengers sign a release form. This was hardly an endorsement of the product, no matter how well C-102 performed. At a time when image was critically important, the message was "Let the buyer beware!"



CF-100 Canuck

Perhaps what sealed the fate of the Jetliner was the Korean War and the CF-100: design difficulties and war pressures. Avro did not have the needed capacity to run a parallel program of the C-102 and the CF-100. In 1952, Howard Hughes tried to get the Jetliner built by Convair in the USA. The US government would have none of it and C. D. Howe was adamantly opposed to any sale to Hughes.

The last time the Jetliner was seen by the public was at the CNE airshow. On November 23, 1956 Don Rogers and Peter Cope flew CF-EJD-X for the last time. Jim Floyd received a memo from Fred Smye on November 30, 1956 to begin dismantling the *Jetliner*.

Quietly.  
Destruction by decree.



Don Rogers

PF

J. H. Orrell  
CHIEF TEST PILOT  
AVRO MANCHESTER



**1st. FLIGHT**

# The 10<sup>th</sup> ANNUAL GENERAL MEETING of the Aerospace Heritage Foundation of Canada

will take place  
on

**SATURDAY, JUNE 12, 1999**

at

**10:00 am**

in the  
**Board Room  
of the**

**Toronto Aerospace Museum  
65 Carl Hall Road  
Downsview, Ontario**

The Agenda will consist  
of

**The President's Report  
Treasurer's Report  
Committee Reports  
and**

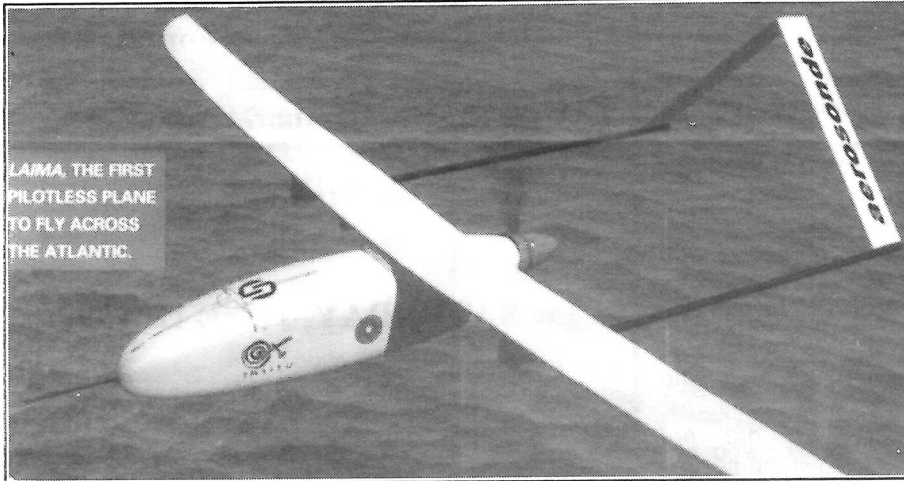
**Other Business  
as necessary which may arise  
and  
the Election of Officers.**

**All members  
are cordially invited to attend!**



## Aerospace:

# No one at the controls: the amazing flight of the aerosonde



WHEN engineers at Avro were faced with the arduous task of obtaining precise technical data about the potential flight characteristics of the Arrow, they innovatively developed and used a telemetric system that, for the time, was amazingly accurate. The engineers, together with the electronic experts achieved this feat of electronics, not only because of their ingenuity, but also because of time pressure to obtain the much-needed data.

Perhaps a variant of such pressure was the stimulus that eventually resulted in the aerosonde. At least, this was the opinion of Juris Vagners, an aerospace engineer at the University of Washington on the California West Coast. Weather forecasting there is restricted by the lack of data about weather fronts coming in off the Pacific Ocean. "East Coast weather is easier to forecast because of the availability of data from the continental United States. "We just don't have the soundings from 3000 miles off the West Coast," he contended. So researchers designed and constructed three aerosondes or robotic "flying weather stations". These scaled-down aeroplanes have a wingspan of 3 metres, are powered by a modified model-airplane engine and the total weight of the aerosonde is only 15 kilos. Each unit carries essential electronics: a radio, a GPS receiver, various meteorological instruments and a computer (Y2K compliant?), all crammed into a one-metre-long compartment. The aerosonde was successfully tested on short flights over the Pacific. The engineers next took it to Canada's East Coast for longer distance field trials. But it was never allowed to go out of sight. When the aerosonde behaved as expected, the next step was the Atlantic Ocean, a shorter distance than the Pacific. The aerosonde then flew from Newfoundland to Scotland, while autonomously following a

flight plan – without ground control – for over several thousand kilometers and endured typically rough Atlantic conditions. This flight was heralded in the aviation and general press, perhaps not as tumultuously as when Lindbergh landed in Paris in 1927, but nevertheless appropriately as befitting the occasion. It became a news item in many dailies and in the "Breakthrough" section of the science magazine *Discover*. The next long-distance flight for the aerosonde is slated for sometime in 2000 or 2001. The flight plan will be from California and ending in Hawaii. If successfully completed, the aerosondes will not be flying as part of a testing program, which included the efficacy of the instrumentation as well as the sturdiness of the aerosonde units. Rather, it can conservatively be expected that the twin-boomed aerosondes will be taking specified ocean weather data regularly after the completion of the Pacific long-distance trials. ✓

## At the National Aviation Museum – Another Avro Arrow Artifact!

The National Aviation Museum (NAM) in Ottawa has a small Avro Arrow exhibit. But every now and then another item connected to the Arrow is found and quickly acquired. An example of this is reported in the Fall 1998 issue of *Aviation Quarterly*. Apparently NAM sent an a Canadair CL-84 Dynavert, which had been languishing in several crates at Rockcliffe, to Airtech Canada for restoration. NAM had no room in its facility to restore this aircraft and so out-sourced the work to Airtech, which does extensive work in aircraft maintenance, repair and restoration.

The office and shop are located just outside Peterborough at the municipal airport, in a rather picturesque outdoor setting. The airport has a 1500 m paved runway, including two IFR approaches; customers can drive or fly in. The crates with the CL-84 fuselage and other components were brought from Rockcliffe and soon the Airtech technicians set to work. When they took apart the crates, they found some parts that did not belong to the Dynavert. With a bit of fitting, they put them together. They were found to be part of a wind tunnel model of the Avro Arrow! NAM was informed of the find and in no time the parts were picked up, documented, cleaned and put on display right by the nose section of RL206.

