



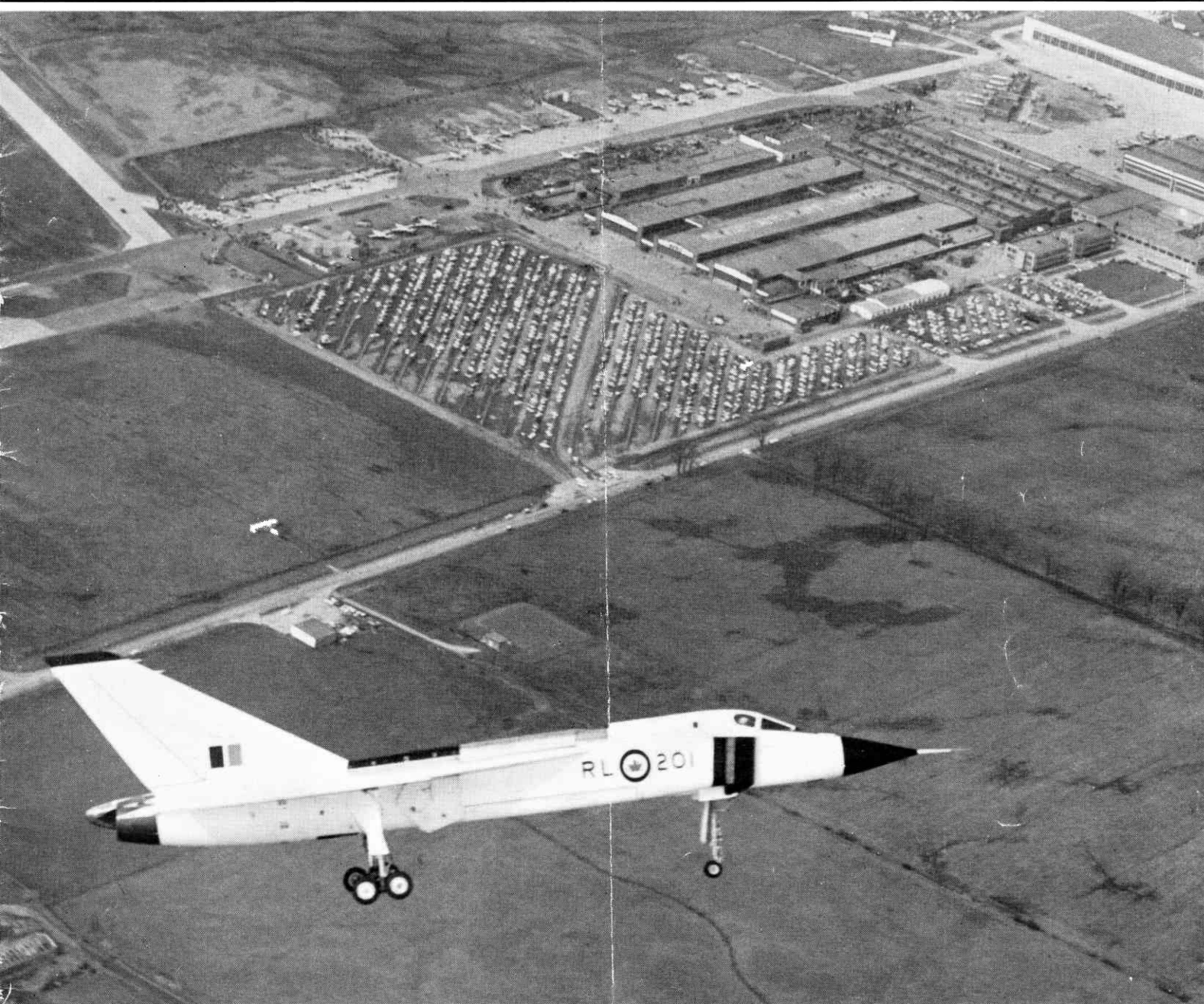
Avro **NEWSMAGAZINE**

**SPECIAL
First Flight
I S S U E**

VOL. 4, NO. 4

PUBLISHED TWICE MONTHLY BY AVRO AIRCRAFT LIMITED

APRIL 2, 1958



Completing its first flight on March 25th, the supersonic Arrow is shown circling over the Avro plant at Malton, prior to landing.

Arrow Flight Test Program Gets Under Way

Each Move Experimental On Arrow's First Flight

By Jim McLean

Editor, Avro Newsmagazine

The first flight of the Arrow on Tuesday, March 25th, triggered Phase I of the big delta's flight test program. It lasted 35 minutes, and was in the nature of a familiarization flight during which, Chief Experimental Pilot Jan Zurakowski "got the feel" of the aircraft by putting it through some elementary manoeuvres.

This is normal procedure for any pilot taking over the controls of an unfamiliar airplane. No two types of airplanes "feel" exactly the same or respond to control movements in precisely the same way. Flying characteristics, idiosyncrasies and limitations of proven airplanes have been established, and can be introduced to a pilot, new to the type, in pre-flight briefings. Shop talk among flying people can help fill in where instruction manuals may not be too explicit. Even so, familiarization flights on proven types are as normal as ham and eggs.

With an untried and unproven airplane, familiarization flights demand a master's touch. There is no room in the cockpit for inexperience or brashness. Wind tunnels, test rigs, electronic simulators and engineering opinion notwithstanding, once a new type of airplane is in the air for the first time, the flight becomes a voyage of discovery for the test pilot—every movement of the controls becomes an experiment. In one sense it can compare to learning how to fly all over again. There is no bible of experience for the type from which the pilot can draw. He will be, in fact, the first author of a new bible.

Such then were the circumstances which governed Zurakowski as he lifted the first Arrow from Runway 32

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From the Office of

J. L. PLANT

To All Avroites:

There is certainly no need for me to remind you of the sense of pride felt by all of us at Avro when the Arrow flew for the first time last week.

It was a proud moment.

We are all contributing in some direct or indirect degree to the development of the Arrow and we all have a right to be proud of this airplane. The Arrow ranks with the most advanced military airplanes in the world, and we believe, on the basis of what we know, that it is more advanced than any similar type anywhere.

The flight was the first step in the flight test phase of the Arrow development program which will continue as long as the aircraft is in use.

The enthusiasm and moral support given to the program by Avroites ensures its continuous success.

It is with pleasure then, that I append to my congratulations and thanks to all personnel for the successful Arrow flight, the following special congratulatory notes from among the many messages received:

To Fred T. Smye from the Minister of National Defence:

"THE FIRST TEST FLIGHT OF THE CF-105 IS A GREAT SUCCESS FOR CANADIAN INDUSTRIAL SKILLS AND A MILESTONE IN OUR AVIATION HISTORY. I KNOW THIS COULD ONLY HAVE BEEN ACHIEVED BY THE TEAMWORK OF ALL AVRO EMPLOYEES. WELL DONE AND BEST WISHES FOR FUTURE DEVELOPMENTS."

To Fred T. Smye from Sir Roy Dobson:

"MY HEARTIEST CONGRATULATIONS ON SUCCESSFUL FIRST FLIGHT PROVING ONCE AGAIN AVRO COMPETENCE. ALL HERE SEND YOU BEST WISHES FOR FUTURE."

To J. L. Plant from A/M Hugh Campbell, Chief of the Air Staff, RCAF:

"THE AIR COUNCIL JOINS ME IN SENDING OUR HEARTIEST CONGRATULATIONS ON THE SUCCESSFUL FLIGHT OF THE AVRO ARROW. THE FIRST FLIGHT MARKS A SIGNIFICANT STEP FORWARD IN CANADIAN INDUSTRY AND AVIATION."



Executive Vice-President
and General Manager.



OVER MALTON at 10,000 feet, the Arrow makes a gentle turn to port. The undercarriage was retracted for a short while during the flight, then lowered to check the operating mechanism.

First Arrow Takes Off On Initial Test Flight

Canadian Aviation History Made In 35 Minutes

AT 9:49 a.m. on March 25, an Avro CF-100 with an Orenda Sabre trailing it, circled low over the button end of Runway 32 at Malton Airport. Suddenly, the CF-100 straightened out and swept along the east side of the runway. The Sabre took up a course on the west side.

This was the signal that Canada was entering the supersonic era of flight. On the runway, below, engines responded to throttle and powered the Avro Arrow toward its first take-off.

Some 3,000 feet along the runway, the Arrow lifted effortlessly from the ground and climbed gracefully to the north at a controlled low speed and rate of climb.

A routine radio check from the Toronto Tower officially recorded the historic event:

"Avro 201 off at 9:51 and cleared to company tower."

Avro's Chief Development Pilot, Jan Zurakowski acknowledged the call and continued climbing northward while the chase airplanes took up their respective positions. 'Spud' Potocki, Avro experimental test pilot, flew the CF-100. In the rear cockpit, Hugh MacKechnie of Photographic, unlimbered

his assortment of still and movie cameras loaded with black and white and color film and began taking pictures.

Further back in the Sabre, F/L Jack Woodman, RCAF test pilot, fitted a movie camera to a special adapter on his hard helmet and prepared to close up if MacKechnie's equipment developed trouble.

The trio flew over the Avro plant several times at different altitudes, exchanging procedure patter by radio and verbally reporting the Arrow's progress for a tape recording in Avro's tower monitor. Then the Arrow began letting down in what appeared to be a fairly tight circuit, approached Runway 32 and landed. The drag chute developed, and the big delta slowed to nearly a full stop before jettisoning it.

The flight had lasted 35 minutes. The Arrow taxied back to the run-up base, and Zura shut down the engines.

The first flight of Phase 1 of the Arrow Flight Test Program had been successfully completed.

Just 35 minutes . . . and Canadian aviation history was written.

The first flight of the Arrow climaxes
(Continued on Page 10, Col. 1)



AT MALTON where 10,000 hands proclaimed him hero of the day, Jan Zurakowski emerges from the Arrow after first flight. Ray Hopper, line chief, was first up ladder to greet Zura.



PART OF HUGE CROWD of Avroites who poured from the plant and offices to watch the historic event, can be seen under the nose of and behind the Arrow after it was parked at the run-up base following first flight. Nose of CF-105 chase plane from which air-to-air photos were taken, at right.



CHASE PILOT, Spud Potocki, reports informally to Vice-President and General Manager J.L. Plant on how the Arrow appeared to handle.

From AVIATION WEEK Magazine—

An American Views the Arrow

WHEN the Arrow was first rolled out last October 4th, some highly complimentary language was used to describe the airplane by writers all around the world. Among these was James S. Butz of Aviation Week, a trade magazine of recognized authority in the United States. Mr. Butz presented a knowledgeable opinion of the Arrow's position in the state of the art, which said in part:

"Avro's CF-105 Arrow has given Canada a serious contender for the top military aircraft of the next several years."

"The Arrow's power, weight and general design leave little doubt of its performance potential. Important features of the present version of the CF-105 include:

- Thrust of approximately 60,000 lb. with Orenda Iroquois engines and afterburning.
- Maximum takeoff weight of about 60,000 lb.
- Area-ruled fuselage.
- Very thin wing with conical cambered leading edges and blunt trailing edges.

"The Arrow was designed specifically as a long-range interceptor which would set new standards for combat ceiling and maneuverability at altitude. The aircraft's chances of meeting these specifications and becoming a truly outstanding fighter are intimately related to its powerplant.

"Primary requirement for pushing effective high altitude operation higher is an outstanding thrust-to-weight ratio

for both aircraft and engine. (Engine thrust rather than wing lift is the main support of today's fighters at very high altitudes. Thrust holds them in turns and other maneuvers without loss of altitude.) If the engine thrust-to-weight ratio is an improvement over existing types, the aircraft can usually be built to show a similar improvement. The main burden on the aircraft is that it must remain stable and flyable at the new altitudes and speed that the improved thrust-weight ratio will allow it to reach.

"Both the CF-105 and its Orenda Iroquois powerplants are approximately four years old and each is about to begin flight test after extensive test programmes in facilities in the U.S. as well as Canada. As a precautionary measure their flight testing will be accomplished separately rather than as a unit. The Arrow will use J75 engines during its first test phases and the Iroquois will be flown in a B-47 test bed.

"Tremendous Rate of Climb"

"The very high thrust-to-weight ratios of the aircraft and the engine which will aid high altitude, high speed maneuverability will also give the Arrow impressive performance in other areas. Its maximum speed should be well over Mach 2 if comparisons with existing fighters can be used as an indication. Since aerodynamic heating problems begin between Mach 2 and 3, the Arrow's top speed will probably be limited by structural heating rather than by a lack of power.

"The rate of climb of the CF-105 should be tremendous at all weights. Even at maximum takeoff weight the Arrow has a thrust-to-weight ratio of about one, which is greater than any existing aircraft except a VTOL.

"As far as ceiling is concerned, Fred T. Smye, president of Avro, has stated that the Arrow will be able to intercept and destroy aircraft flying at 75,000 ft. There was no explanation as to whether the Arrow would reach this altitude in a zoom climb, or whether

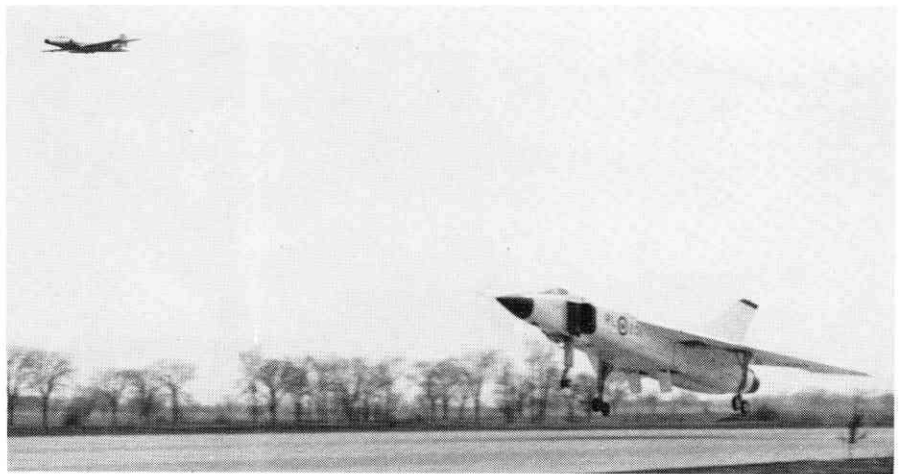
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SHOULDERED BY JUBILANT AVROITES on successful completion of the first flight in Phase I of the Arrow's Flight Test Program, Jan Zurawski received ovation from assembled crowd. This was the only time during the whole day that Zura appeared uncertain as to what might happen next.



WARM CONGRATULATIONS are extended to Zura from Harry Beffort, Production Shop Manager, a key man in the Arrow's construction.



ESCORTING ARROW on its maiden flight, the CF-100 flown by Spud Potocki, is seen upper left in this unusual photo which has caught the Arrow airborne just a few feet above the runway. For take-off, Arrow RL-201 used only about 3,000 ft. of Runway 32, recently extended to 11,000 ft.

From **FLIGHT Magazine**—

A Britisher Views the Arrow

UNDER the heading, "Arrow—A World Leading Interceptor by Avro Aircraft", a leading article in Flight magazine of the UK described the aircraft as "the biggest, most powerful and potentially the fastest fighter that the world has yet seen".

The writer, W. T. Gunston, technical editor, referred to the Arrow roll-out as "a significant ceremony". He went on to say:

"We in Britain have nothing like it. Two years ago we curtailed the development of a machine which would have begun to approach it—the so-called "thin-wing Javelin"—and have since relied implicitly on a superb electronic defence environment and relatively small weapons such as the English Electric P.1B and Thunderbird and the Bristol Bloodhound.

"Even the USA", Mr. Gunston continued, "has nothing like the Arrow; yet in that country the development of manned interceptors is by no means dead. North American Aviation hold a development contract from the US Air Force in respect of Weapons System 202A, which enjoys a development priority equalled by only one other USAF aeroplane. The vehicle for this weapon system will be the F-108, a chemical-fuel aircraft intended to reach at least Mach 5 (a scarcely credible figure".

"Of Inestimable Value"

Mr. Gunston described the Arrow as not only the "weapon which can meet the future defence requirements of the RCAF but it is also the only aeroplane of any type in the British Commonwealth which can fly at more than twice the speed of sound; moreover, it can hold its maximum speed indefinitely. Such aeroplanes are going to be of inestimable value, and one this year is worth several next year.

"Considered solely as a weapon system, the chief raison d'être of the Ar-

row is to be found in the enormous extent of the area which it is designed to defend. Including her numerous water areas Canada covers no less than 3,737,923 square miles, and is thus much larger than Europe or the USA. During the past five years the electronic defence systems of North America have improved out of all recognition, and there exists today a formidable barrier of long-range radars and fighter bases all controlled from a unified HQ in the State of Colorado, USA. Yet this "infrastructure" is of no value unless the means exist to intercept and destroy any raiding bomber which might be encountered.

"Nothing at present available can do this, unless one is prepared to finance the cost of not merely dozens but hun-

(Continued on Page 10, Col. 2)



OUT OF HOSPITAL just to see the Arrow fly came Harry Shipley of Flight Test, left, who said nothing could make him miss the event. With him is Ken Cooke of Engineering who is watching the first flight through binoculars.



THE LINE CREW—the boys who give final touches to pre-flight preparations, are shown giving Zura heart-felt cheer. From left to right are: Bill Forester, Doc Staly, Jack Gary, Arnold Banks, Bill Seggie, Johnnie Straboe, John Salmon, Zura, Bob Levitt, Murray Boyd and Art Cowper.

First Flight News Blankets World

Estimate Million Canadians See First Takeoff Same Day On TV

WHILE Avroites and their families last week were reviewing together, at home, the excitement of the first flight of the Arrow, they were joined by many millions of well-wishers throughout the Western World.

Within two hours of the take-off on Tuesday morning, more than half a million people in the Toronto area alone, read or heard about the first flight through their favorite newspaper and, or, radio station. Before Avroites went to bed that same night, it is estimated that coverage in the combined Oshawa-Toronto-Hamilton area was well past the million mark.

What about the rest of Canada?

Well, by bedtime on the day of the first flight, the story had been flashed across the continent, from Newfoundland to B.C., by the Canadian newspaper wire services with total coverage exceeding 10 million newspaper readers: in addition, the story had been

**By Arthur H. Stewart
Public Relations Manager**

carried during that day and evening by national radio news services into an estimated million Canadian homes.

Then, in graphic recapitulation of the story spread by the radio and newspaper world, there was the impact of television on more than one million Canadians, as estimated by the CBC-TV. It can be assumed, of course, that there was audience duplication between newspapers, radio and television. But, regardless, at least 10 million Canadians knew about the Arrow's take-off into the supersonic era of flight before they went to bed last Tuesday night.

What of our neighbours to the South? Through the same media as in Canada—wirephotos, news wire services, radio and TV—the story of the Arrow's first flight was flashed from

Malton to Toronto to New York and on across the USA to be picked up by individual newspapers, radio and television stations.

What of the rest of the world? Here, the figures climb astronomically.

Perhaps it's time to take a look at a rundown of the system used by Avro's PR in getting out the story of the flight to the Free World. In this way, a mental picture of millions of people learning of the Arrow's historic first flight takes on a better perspective.

Planning and Liaison

Months of planning and programming by Public Relations with worldwide news media and representative news writers preceded the first flight. More than 2,000 letters, cables and press enquiries had been processed by PR since the turn of the new year.

Liaison with the CBC-TV in the weeks immediately preceding the take-off had resulted in a movie distribution system being organized with the major international TV agencies of the Free World.

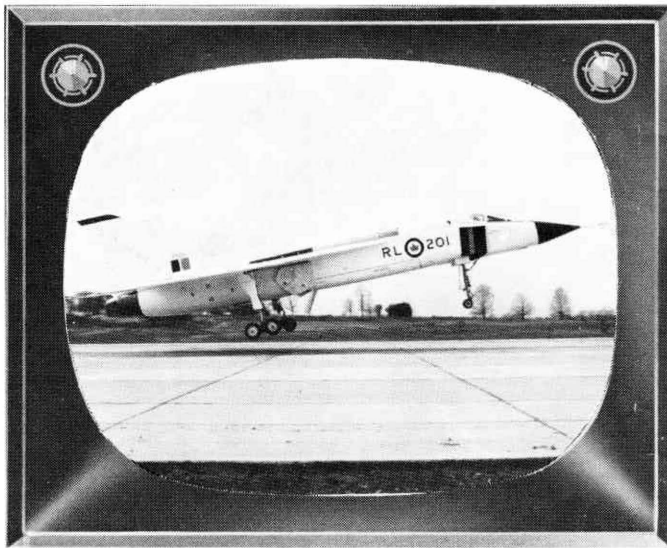
Similarly, liaison with the Canadian Press News Service head office in Toronto automatically established a world-wide distribution of the story to newspapers and radio stations through the very nature of the international news service organization.

Briefly, material provided by Avro Public Relations to the Canadian Press news service and augmented by their own on-the-spot representative, was processed and distributed by CP across Canada into the offices of sister organizations in the United States. These include: Associated Press, United Press and International News Service—and through them, material was distribu-



PRESS CONFERENCE was held in Avro offices after the first flight debriefing. The happy group shown facing the press above are, from left: Jim Floyd, Vice-President Engineering; J. L. Plant, Executive Vice-President and General Manager; Zura; Duke Riggs, Works Manager and Spud Potocki, pilot of Avro's chase plane which followed Arrow at distances of from 30 to 150 ft.

BELOW at left is the Arrow as it appeared on National TV News the same day. At right is how Zura appeared on TV that same evening being interviewed by CBC Newsman Joe Gibson.





ted across the USA and—as with the Canadian Press—across the seas to Europe and Asia.

Similarly, photographs of the Arrow taking off, landing and in flight were taken and processed by Avro and rushed to the Canadian Press head office in Toronto and through their wire service, were distributed to the leading daily newspapers in Canada, down into the USA and across the seas to the UK for world-wide distribution.

In addition, movie film produced by Avro, and processed the same afternoon, was picked up by the CBC-TV organization to augment their own take-off footage and distributed across the world. As a CBC official remarked: "The TV coverage of the Avro Arrow serviced every nation in the world ex-

(Continued on Page 11, Col. 1)

AVRO PHOTOGRAPHIC CREWS shown above at briefing, recorded publicity and engineering stills and movies of first flight. Sitting, left to right are: Lou Wise (supervisor), Peter Brown, Cy Beard, Harold Roberts, George Laidlaw, Granville Stuart and Jack Hurst. Standing, from left are: Al Betts, Bill McDowell, Fred Hopkinson, Russ Thompson, Ron Northcott, Stu Barefoot, Hugh MacKechnie, Cliff Heckel (Orinda), Ron Nunney, Len Goodenough (Orinda), and Verne Morse, PR Photographer.

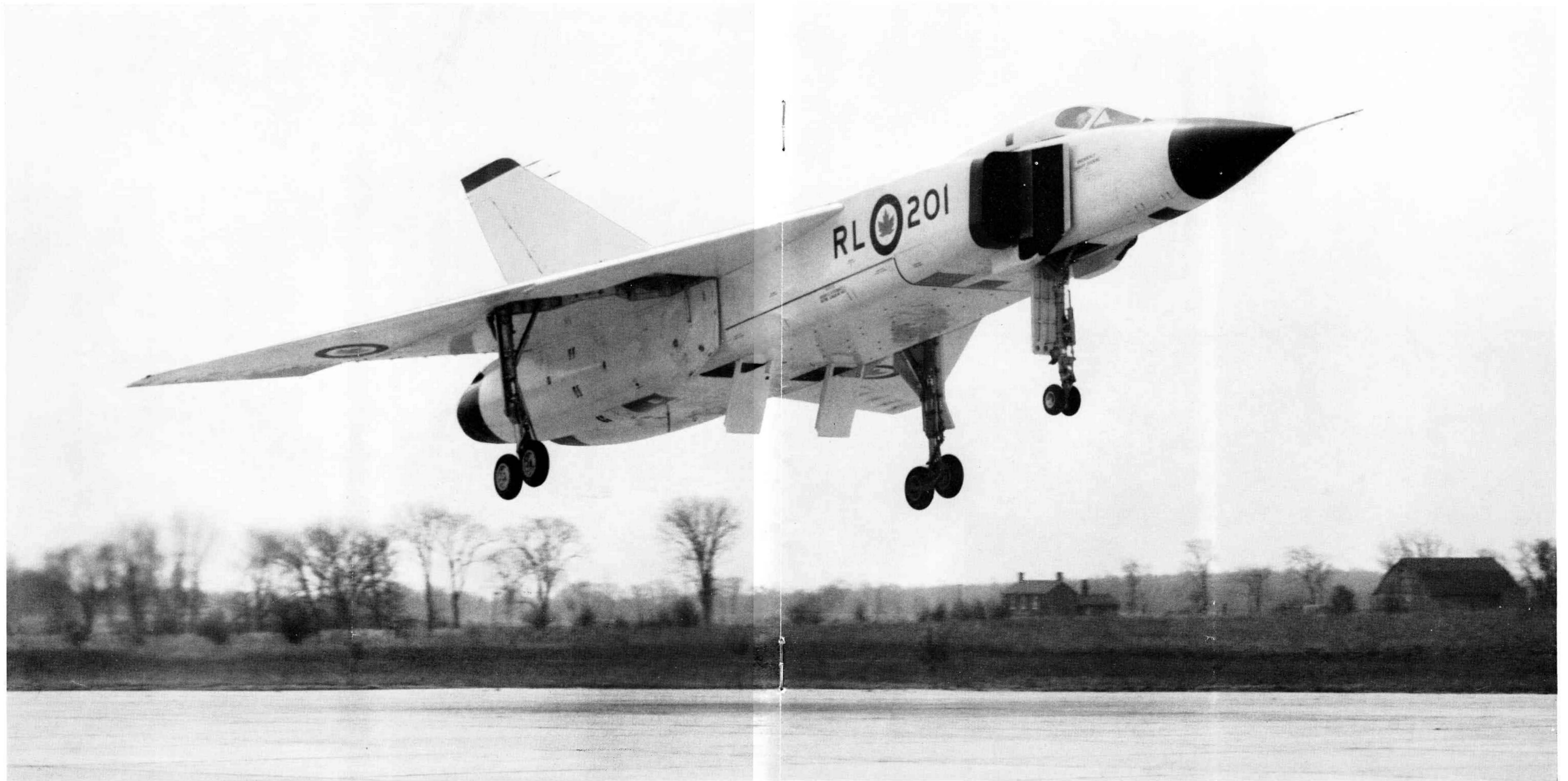
RIGHT—Jim Hornick, well-known newswriter on Toronto's morning newspaper, the Globe & Mail, is seen interviewing Zura after the flight.

BELOW LEFT—Zura and Spud Potocki arrange through A. H. Stewart, Public Relations Manager, (left), to tape record an interview requested by radio station CHML in Hamilton.

BELOW RIGHT—Bill Gilmour of radio station CFRB, Toronto—nephew of Newsmagazine's Sport Columnist Hugh Gilmour—is seen at left making tape recording of interview with Zura and Spud Potocki supervised by A. H. Stewart.



World Press Lauds Avro When First Arrow Airborne On Maiden Flight



Avro ARROW I - Airborne at Malton.

CBC TELEVISION NEWS—National Edition—"The big story today is the first flight of the supersonic CF-105 Avro Arrow at Malton Airport near Toronto. The 32-ton delta-winged all-weather interceptor took off from Malton's 11,000-foot runway this morning after a take-off run of nearly 3,000 feet. CBC cameramen were on the spot to record this historic event so let's watch the first flight of the Avro Arrow . . ." Ed: the nation's TV screens then showed the Arrow sifting down Runway 32, the nose wheel came off the ground, then the big delta lifted smoothly into the air and viewers watched it climb from sight.

THE TELEGRAM—"Chief development test pilot Jan Zurakowski got a football hero's ovation from over-joyed Avro Aircraft workers today as he taxied the 32-ton, delta-wing Avro Arrow in from its first successful flight. Avro officials found it impossible to keep employees at their jobs when word swept through the plant that Zurakowski was to make an attempt at flying the Arrow for the first time. The plane shot into the air at 9:55 a.m. as smoothly and as gracefully as the arrow for which it is named. Little more than half an hour later, the 43-year old pilot touched the huge machine down gently and gracefully."

THE TORONTO DAILY STAR—"The delta-winged Avro Arrow darted into the air at Malton Airport today for the first time. The flight was the climax of four years of research and building. On it was pinned the hopes of more than 600 separate companies who had built parts for this machine which will fly at more than 1,200 mph. The employees of Avro Aircraft and hundreds of others were out on the field this morning to watch the successful flight. In the chase plane, which was a CF-100, the pilot was Zurakowski's wartime flying buddy, Spud Potocki. The plan for the test flight went exactly on schedule."

THE GLOBE & MAIL—"The world's largest jet interceptor, closely pursued by two photographic planes, roared smoothly into a clear sky at Malton Airport yesterday on its maiden flight. When it touched down 35 minutes later, a brake parachute streaming from its tail, the airliner-size Avro Arrow had performed as predicted. Announced James Floyd, vice-president in charge of engineering for Avro Aircraft Ltd. 'Everything went exactly to plan.' Commented Test Pilot Jan Zurakowski, a man noted for his understatement: 'It handled nicely. There was no unexpected trouble.' "



FIRST FLIGHT CONTROLLER in the Avro tower was Don Rogers, Chief of Flight Operations, shown above using the tower radio to maintain contact with the Arrow and its chase plane escorts during the history-making flight.

British View of Arrow From Flight Magazine

(Continued from Page 5, Col. 2)

dreds of bases for such devices as Bloodhound, Bomarc and Nike Hercules. It is a job which calls for a big, long-range, piloted aeroplane, with a flashing performance and all the tools of the interceptor's trade.

"It is fitting that the mighty task of producing such a weapon should fall to Avro Aircraft, since that youthful company was responsible for Canada's first home-defence interceptor (it was also the first all-Canadian aeroplane and the Dominion's first jet aeroplane."

Mr. Gunston went on to describe the CF-100 as "a tremendous achievement that has done much to instil into Canadians a long-overdue appreciation of their ability to design and build advanced aircraft fully comparable with those of America, Britain or any other country. This self-confidence must be regarded as a pre-requisite to the successful development of the CF-100's successor."



CHASE PILOT in the Orenda Sabre was F/L Jack Woodman of the RCAF. He is shown here in the cockpit of the Sabre wearing a hard helmet fitted with a special adapter for holding, aiming and operating a small movie camera.

Arrow's Initial Test Flight

(Continued from Page 3, Col. 2)

four and a half years of research in engineering and manufacturing, in fields completely unknown when the project was first undertaken.

It was in July, 1953 that the Government authorized a design study of the CF-105, the code name given to the Arrow. Within two months, the first wind tunnel tests were being run. These ranged from slow speeds to twice the speed of sound, and 17 models of various sizes were used to obtain necessary structural and aerodynamic data.

Wind tunnel limitations caused Avro engineers to explore further techniques for obtaining important aerodynamic data. Eleven large scale free-flight models with rocket-propelled boosters were fired at ranges in Canada and the United States between 1954 and January of 1957.

Power Plant Plans

The power plant program now in effect, and established in 1955, calls for twin Pratt & Whitney J 75s to power the pre-production Arrows. These will eventually be supplanted by the new Orenda Iroquois, which will give the Arrow a thrust to weight ratio of one to one. Although the Iroquois' development is well advanced, the combination of an untried engine and an untried airframe is considered not practical on an aircraft development flight test program.

From the time the basic configuration of the Arrow was established to the end of 1956, approximately 460 engineers, technicians and draftsmen worked on the design and development of the aircraft and its systems.

The wide variety of mechanical, hydraulic, electrical and electronic equipment in the Arrow is required to oper-

ate in a severe high-temperature, high-altitude environment with utmost reliability. Equipment which would perform satisfactorily under these conditions did not exist when the Arrow design got under way.

Long before the first of the 17,000 engineering drawings were released to Avro's Manufacturing Division, preparations for production planning and tooling-up were already well under way.

Each Move Experimental On Arrow's First Flight

(Continued from Page 2, Col. 1)

last Tuesday. His mission was to become familiar with, and obtain a pilot's assessment of Canada's first supersonic interceptor.

To do this, he took off, climbed to 5,000 ft., levelled off and raised the undercarriage.

He continued to 10,000 ft., with the chase planes watching each move, he made some gentle turns and let-downs, first with the gear up, then with it down in order to get the feel of the Arrow on approach to landing. During this time, mechanisms were checked and instrument readings noted. He then let down, approached the runway and landed.

The very significant first flight signalled the start of a detailed development program which will culminate in the most effective defensive weapon system in the history of Canada.

This, in brief, is the background of the first flight of the Arrow I in its airworthiness and equipment-functioning flight test program.

It doesn't even begin to touch on the

strain and effort and, in many instances, selfless dedication by Avro personnel which made the first flight a successful historical episode in the introduction of Supersonic Flight in Canada. As the man says. "That's another story".

American Views Arrow In Aviation Week . . .

(Continued from Page 4, Col. 3)

the Arrow actually had to reach 75,000 ft. for its missile armament to destroy the hostile aircraft, but it does give some indication of the Arrow's altitude capability.

"In the design of the Arrow, the Canadians state that they have tried to make the best possible use of their association with two foreign aircraft industries. They maintain intimate contact with British and American work, especially with projects that are similar to their own. For instance, delta-wing flight test and experimental work at Convair and in England have aided Avro materially.

"J. C. Floyd, Avro vice-president, engineering, who has technical responsibility for the Arrow, is strong in his appreciation and praise for the kind of assistance Avro has received from NACA, the Air Force and Navy as well as some U.S. companies. Other Avro officers and Canadian government officials took the opportunity of the Arrow unveiling to make similar acknowledgements of U.S. help and co-operation.

"However, the exchange of information is anything but one-sided. Some of the most important Canadian contributions so far have been in metallurgy and aircraft and engine structural design and fabrication techniques."



TO PHOTOGRAPH ARROW from the rear cockpit of the CF-100 chase plane, Hugh MacKechnie of Photographic, left, had to carry movie and still cameras and magazines and slides of color as well as black and white film. He shows modified Speed Graphic to Spud Potocki.



HEAVILY-INSTRUMENTED ARROW transmitted signals to Telemetry Van, above, where complex electronic equipment makes engineering analysis of performance possible while aircraft is still airborne. Operators shown are: Bill Moore, Ray Gibson, Al Maddock and John Lockyer.

First Flight News Blankets World

(Continued from Page 7, Col. 1)

cepting those behind the iron curtain."

And in addition to supplying background and spot news material for newspaper, radio and TV coverage, Avro produced more than 1,000 photographs in less than 24 hours, of the many aspects of the first flight for immediate, specific publicity usage as organized in the months preceding the first flight.

Also, original negatives of the more outstanding pictures were airmailed on the day of the flight to key news agency points in the USA, UK and the Continent for their respective distribution to clients. Photos also went to internationally-read aviation 'trade' magazines in Canada, the US and UK for their exclusive use.

Additional Media

In addition to media mentioned, there is the vast audience of the movie theatre that was serviced during the flight by screen news photographers. This adds many more tens of thousands to the total audience so far classified.

As this story is being written, the week of the first flight is drawing to a close. The message is gravitating away from the daily newspaper and spot news radio coverage to "round-up"

radio and television programs. It is likely that even as you read this you will already have seen more than one weekend radio and television program that had a combined audience in the tens of millions.

Why such extensive News coverage? Well . . . it has been said that "bad news travels fast" and has a big impact on arrival. Why not try this out with some good news? And what better news than that Western defence against possible aggression is assured of a phenomenally strong arm in the not-too-distant future through the Avro Arrow bomber destroyer. The press unanimously agreed that this was News which rated top treatment.

"Bright Herald"

World opinion of the Arrow's introduction? It follows along the lines of the words of the editorial department of the Toronto Telegram that stated: "The Arrow is a tremendous production achievement. Aside from war and the Arrow's function of intercepting enemy aircraft and, as well, delivering the assault of nuclear and other weapons, the new aircraft is a bright herald of faster, long-range peaceful flight. Men like Jan Zurakowski, the test pilot, and the complex planning and production organization behind

the Arrow, are combining to extend the frontiers of mankind's travels."

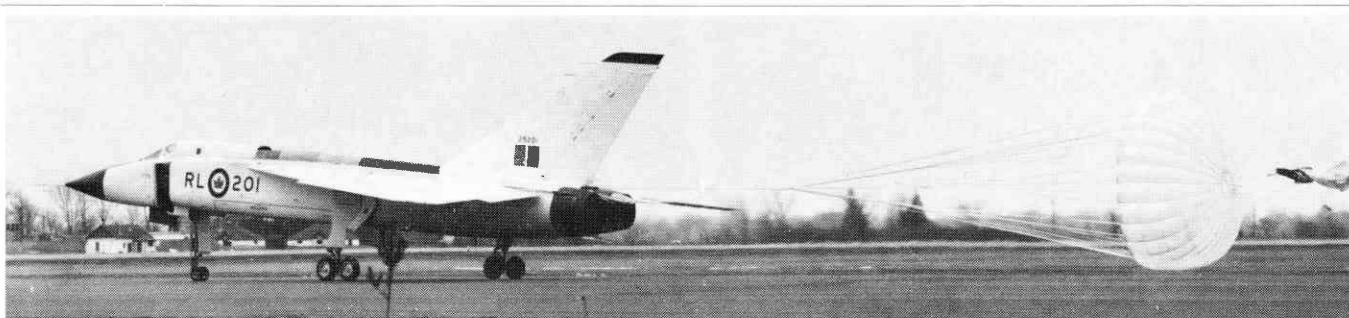
To give one indication of the manner in which a good news story—like the Arrow's flight—develops like a snowball tumbling down hill is seen in a telecast across the USA by the Dave Garroway Show with its audience listed in the many millions.

Coast-to-Coast on U.S. TV

Last Fall, you may recall, the Garroway Show did a live broadcast from Toronto that included references to the preliminaries to the rollout of the Arrow. Cameras panned across the closed hangar doors at the end of Bay 1 and the commentator remarked: "Behind these doors is developing a tremendous achievement in world aviation; but it is top secret".

On Wednesday morning following the Arrow's first flight, the New York announcer of the Garroway Show recalled this incident and then commented: "And now the doors have opened and this is what happened yesterday in Canada". The Garroway audience then saw the first flight of the Arrow.

Where did they get the film? From the CBS, via the CBC, via Avro PR, via Avro Photographic Department, from the back seat of a CF-100 over Malton.



FULLY DEVELOPED DRAG CHUTE shown above brought Arrow to almost complete stop without brakes on first landing, well before end of runway.



DUKE VISITS CANADIAN BASE—Pointing out the main features of the RCAF's CF-100 twin-jet all-weather fighter to H.R.H. the Duke of Edinburgh is Air Vice-Marshal H. B. Godwin, commander of Canada's NATO Air Division. The Duke, visiting relatives in Germany, landed his personal aircraft at the RCAF's No. 4 Fighter Wing, Baden-Soellingen, Germany, one day this month and spent an hour touring the fighter base.

Three Weeks' Vacation For Ten Years' Service

Three weeks' vacation will be coming to all Avroites who have 10 years' continuous service with the company as of June 30th this year, according to an announcement by E. F. Alderton, Industrial Relations Manager.

The continuous service will, of course, include service with the company during the time it was called A. V. Roe Canada Ltd.

Wherever possible, says Mr. Alderton, those Avroites who qualify will receive three weeks vacation with pay at the time of the annual vacation, (first two weeks in August). The third week will come either immediately before or immediately after the plant shutdown.

However, the announcement continues, if work schedules or other essential requirements of an employee's job prohibit his taking the extra week at the specified time he has two alternatives. He may be required to forgo the third week of vacation and be paid one week's vacation pay in lieu of it, he may take the third week at another time.

Employees who are eligible for three weeks' vacation with pay will be informed as to the holiday arrangements by their foremen or supervisor before April 1st.

New Appointments In Two Divisions

The following appointments to the staff of the Arrow Weapon System Co-ordinator have been announced by J. A. Morley, Vice-President, Sales and Service.

George Oscar becomes Assistant Arrow Weapon System Co-ordinator—Programs; Irv Liss, Assistant Arrow Weapon System Co-ordinator—Supporting Systems; Ivan Craig, Programs and Schedules Supervisor; and Donald W. Muggeridge, Administrative Assistant.

In their new assignments these men will assist W. R. (Bill) Stephens in co-ordinating the various activities on the Arrow Program within the Company and with the Associate Contractors involved in the Arrow Weapon System.

W. G. (Graham) Eves, former As-

sistant Industrial Engineering Manager, has been appointed Industrial Engineering Manager, effective March 15, it has been announced by W. H. Riggs, Works Manager. Mr. Eves will report directly to Mr. Riggs.

The announcement of the new Senior Management appointment was coupled with that of the resignation of S. L. H. (Stan) Wilson, who is taking over special assignments for Fred T. Smye in Mr. Smye's capacity as Executive Vice-President, Aeronautical Division of the parent company, A. V. Roe Canada Ltd.

In extending to Mr. Wilson the best wishes of his colleagues at Avro in his new appointment, Mr. Riggs pointed out that he "will take to his new task a wealth of experience gained over many years with Avro in the field of Industrial Engineering". As is well known, Mr. Wilson has played a major part in the successful growth of AVRO over the years since A. V. Roe Canada Limited started at Malton back in 1946.

New Malton Ratepayers Elect First Executive

The newly-formed Malton Ratepayers Association, has elected three Avroites to its four-man executive.

Frank McKechnie of Jigs and Fixtures is President; Jack Bailie, Inspection, Bay 2, is Vice-President; Bob Terbit of Flight Test, is Secretary and Bill Newbound of A. V. Roe Canada's Internal Audit is Treasurer.

To facilitate the handling of problems at meetings, Malton was divided into four ratepayer areas: Ridgewood Estates (across from Orenda), Old Malton, New Malton (wartime housing) and Marvin Heights. Each area has appointed a representative to the new association.

Next meeting of the Association will be on Wednesday, April 9th at 8:00 P.M., and the guest speaker will be Mrs. Mary Fix, Reeve of Toronto Township.

First Ten-Year Club Dance

The Avro Aircraft Ten-Year Club held its first Annual Dance at the Palace Pier on Saturday, March 29th. Reg Whittington, President of the club says the dance was a big success, and gave all members of the Ten-Year Club an opportunity to get together for the first time to have a real party. Reg points out the physical problems which made it impractical to have all Ten-Year Clubbers attend the annual banquet in December when new members officially join the club. The problems have forced the adoption of the practice which limits attendance at the Annual Dinner to members who become eligible at that time.

D/O Dinner Big Success

The 1958 Design Office Dinner was held last Thursday at the Crystal Ballroom in the King Edward Hotel, and reports indicate it was the most successful engineering dinner so far.

Chairman was Jim Floyd, Vice-President Engineering, and the guest speaker was J. L. Plant, Executive Vice-President and General Manager. Details of the dinner will appear in the next issue of Newsmagazine.

ANNUAL VACATION

The Plants and Offices of the Company will close down for the **Annual Vacation, the first two weeks in August, commencing at the end of the night shift, Friday, August 1st, 1958**, it has been announced by E. F. Alderton, Industrial Relations Manager. The above vacation dates will apply to all employees unless otherwise scheduled.

GOOD FRIDAY HOLIDAY

In observance of Good Friday, E. F. Alderton, Industrial Relations Manager, announces that the Plants and Offices of the Company will close at the end of the night shift on Thursday, April 3rd and will reopen at the beginning of the day shift on Monday, April 7th, 1958.

Manufacturing Appointment

Effective April 1st, E. B. (Ted) Bragg becomes Production Engineering Manager, taking over the duties of Harold F. Young, who is leaving Avro to become Chief Production Engineer with the Steel Fabrication and Manufacturing Division of Dominion Steel and Coal Corp., Limited.

In announcing the change, W. H. (Duke) Riggs, Works Manager said:

"During the past five years, Mr. Young's efforts as Production Engineering Manager have contributed greatly to the success of this Company. We wish him every success in his new appointment.

Hockey Night Features Hotly-Contested Game

By Hugh Gilmour

Before another good-sized crowd of some 9,000 hardy souls, Orenda demonstrated that in hockey, as in all other things, experience is the best teacher, as they downed Avro 5-3 in the second annual Hockey Festival night.

A snowy blustery night kept the crowd down considerably, but those who did come were treated to a very fine exhibition of hockey. Both clubs set a blistering pace throughout. Last year, Avro finished strong, overcoming a three-goal deficit. This time it was Orenda who finished strong rapping in three last-period counters to Avro's one. Avro tried hard, but their passing and shooting at times was a little on the weak side.

The Ben Harris Memorial Trophy awarded to the player who best combined ability with sportsmanship on the night's play went to big Dave Irons of Orenda. The selection was no easy task for John Kennedy of Orenda and yours truly. Every player on the ice gave his all. For Orenda Captain Billy Chard, Coach Frank Ptashnik, Frankie Stephenson, Joe Scattalon and Roy Luyben all turned in top grade efforts. For Avro, Coach Ben Chapman was a tower of strength on defence and set up many fine plays. "Dixie" Rhodes played a whale of a game in goal, and on several occasions robbed Orenda snipers of sure counters at point-blank range. Maxie Foster with two goals, Lefty Chard, Don Haynes and Billy Smith are all worthy of honorable mention by their showing.

Second Theatre Night For Avroites Next Week

A special showing of the famous **Around the World in Eighty Days** is being held for Avroites at the Tivoli Theatre, Toronto, on Wednesday, April 9th, at 8:30 in the evening.

This becomes the second theatre night to be organized by the AARC and it is planned to have many more in order to help round out the recreation program and expand its diversified line-up of things to do for all recreation club members.

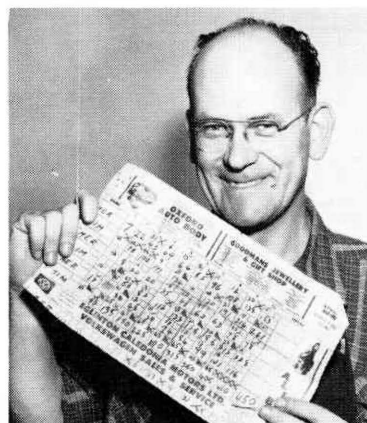
A few months ago more than 300 Avroites attended a special theatre night at the University Theatre to see **This is Cinerama**. The general reaction was "there should be more of these".

The current TODD-AO production of 'Around the World in Eighty Days' is soon to be followed by another TODD-AO spectacular—**South Pacific**. Plans are already under way to have a special Avro night for this show.

"This is Cinerama" will soon be replaced by **Cinerama Holiday**, which presents still another opportunity for an Avro Theatre party.

Negotiations are also under way for those interested in musicals to organize Avro nights this summer to attend a number of **Melody Fair** productions scheduled for the summer season at Dixie Plaza.

The regular price to attend "Around the World" is \$2.00. The price to Avroites is \$1.60 and tickets are available at the transportation counter.



PERFECT BOWLING SCORE of 450 pins was recorded recently by Jim Williamson of Manufacturing, seen above with the score sheet. Jim's accomplishment is doubly impressive since he became permanently crippled from a Polio attack when he was nine years old.

Don't Overlook New 100-Dollar Exemption

Avroites are reminded that Income Tax Regulations pertaining to their 1957 returns, permit a flat deductible item of \$100 to cover expenditures for Charitable Donations, Doctor and Hospital Bills and Union Dues without including receipts totalling this amount.

Claims for exemptions under these heads which exceed \$100 must include all receipts amounting to the total claimed. These, if not already in hand, should be available on request from the appropriate sources.



AVRO MODELLERS SHOW THEIR STUFF—The variety of model aircraft shown above include a Lancaster bomber on which all four engines operate, free flight rubber-powered endurance models (on each side of the Lanc) and radio-controlled gas-powered models in front. The radio-controlled jobs can take off by remote control and can be looped, rolled, spun and landed at will. Once on the ground they can be taxied by radio. All the models shown have been in contests in Canada and the USA and have been awarded many prizes. The proud owner-builders above are: front row from left, Ed. Taberner, Doug Moore, and Bill Proctor. Standing, left to right: Bill Etherington, Graham Ireland and Jerry Walker.



MOVIES • BOOKS • TV • RADIO

Hear-See

THEATRE • MUSIC • RECORDS

By Elwy Yost

AIR AGE FILMS around Toronto and Brampton areas are currently giving Avroites plenty of fast-paced entertainment for their "evening out" fare.

Jet Pilot, Howard Hughes' production in color stars John Wayne and Janet Leigh. **Bombers B-52**, with Karl Malden and Natalie Wood, describes the work of air force technicians who keep the planes flying.

Arthur Hailey's **Zero Hour** depicts the gruelling test that confronts a former air force Captain (Dana Andrews)—nerve shattered by an error of judgment during World War II—when he is forced to land a passenger plane on a fog-bound air trip because both pilots are stricken by food poisoning.

High Flight, recently here from England, puts Ray Milland in the seat of a Hawker Hunter and achieves some bristling suspense in its off-beat climax. In **The Tarnished Angels**, William Faulkner's post-War I story, Rock Hudson and Robert Stack play barnstorming aviators, ably assisted by pert Dorothy Malone.

And while we're on the subject of good aircraft films, what about a few words of praise in the direction of **Lou Wise**, Photography, for his many fine home-grown documentaries on the **CF-100**. Mixing a sound technical format with sheer pictorial poetry, Lou and his staff have captured the all-weather interceptor in color and performance images that do the Industry proud.

★ ★ ★

MUSIC: June was truly busting out all over earlier this month when the **Avro-Orenda Choir** opened an evening of downright, spanking good entertainment with selections from **Carousel**.

The place: United Church, Malton. The program: a generous helping from such Broadway musicals as **My Fair Lady**, **Brigadoon** and **Oklahoma** plus some wonderful old ballads including **Shannandoah** and **The Tramping Song** (Hebridean). And—much, much more.

Mike Dore, Recreation Supervisor, handled the MC chores with thoroughgoing ease, and all participating guys and gals gave forth with fine voice and plenty of enthusiasm. But don't take our word. Take in the next **Avro-Orenda Choir** evening of fun and music and judge for yourselves.

★ ★ ★

TV TATTLE: Sid Caesar's Sunday ratings are low but we still think he's tops. **Ovide** and **Cecile** won't be with **The Plouffes** when the show goes into another season under **Roger Lemelin's** pen. **Adolph Hitler** might be a mystery guest of **Front Page Challenge**. Did you catch **Rudolph Valentino** in **Blood and Sand** last month or **Buster Keaton** in **The General**? Expect more of same come Spring.

★ ★ ★

EASTER PARADE this year for **Pat Payie**, Welfare, means a weekend jaunt to New York where **Lil' Abner** and **My Fair Lady** are on her "must see" list.

We gather from shop talk a number of Avroites are following suit so here are some other productions well worth investigating:

Look Homeward, Angel, adapted from Thomas Wolfe's epic novel stars Anthony Perkins and Jo Van Fleet and tells of the tragi-comic process of growing up against a family boardinghouse background in the south. **Jamaica**, with Lena Horne (need we say more?). **The Entertainer**, featuring Sir Laurence Olivier in his most astonishing role to date as a shoddy, cynical, cheap-Jack vaudevillian (yes, he sings and dances). Leonard Bernstein's new musical experiment, **West Side Story**, re-telling the Romeo and Juliet theme in terms of modern day gang warfare.

CLASSIFIED ADS

This want ad service is offered free of charge to employees only. Turn all ads in to **EMPLOYEE SERVICES DEPT.** and not **AVRO NEWS**. Include your name, home address and house telephone number, in that order, with your ad. No Avro Aircraft local telephone numbers can be published. Ads will be repeated only on renewal of the ad.

ARTICLES FOR SALE

SPACE heater used only 1½ months. medium size. Sell for half price. Prospect 3-5544.

BOXER puppy, pure bred, reasonable. TR. 8-6719.

ALTO Saxophone, good condition. Brampton, GL. 1-2267.

TWO rifles, .22 calibre single shot, new condition, \$5 each. CH. 4-4816.

BOY'S bicycle, Dunell, 18" frame, with dynamo. Good condition, \$20. LE. 1-1488.

OUTBOARD motor, late 1956 Mercury silent six. Only 15 hours running. New condition, \$195. CH. 6-3257.

SHOT gun, 12 gauge, (single) with recoil pad. Also solid oak gate leg table. Also baby's toilet chair, chrome railing counter top. RO. 7-8595.

CHROME kitchen set, chest of drawers, pair continental beds, six-piece bedroom suite, two-piece lounge suite, green nylon fabric, 21" Westinghouse TV. CL. 1-9362.

MOFFAT range in excellent condition. CH. 6-2910, ask for Mr. Radford.

BABY crib, solid ends, natural finish, four positions, largest size, new condition, spring filled water-proof mattress. Also Bathinette, trundle make, all aluminum, like new. Also commode chair and car seat. BE. 1-1442.

12-VOLT battery, two months old, five year guarantee. LE. 1-2566.

FIVE-PIECE chrome suite, chesterfield and chair, Hollywood couch, three-piece bedroom suite, single bed and mattress, baby's crib, high chair. All reasonable. BU. 6-8868.

COMBINATION frig and freezer. Take over payments. Acton 772W.

12-FOOT boat, 60" beam, price \$50. GL. 1-5808.

FRIGIDAIRE refrigerator, 7 cu. ft., approx. nine years old, 60 cycle. Very good condition. Atlas 8-0194.

GUITAR, Spanish, good condition, complete with new carrying case. RO. 2-7649.

DINING room suite, solid oak, eight pieces. Good condition, \$60. GL. 1-6638.

LADIES' bicycle, \$7. GL. 1-6311.

ELECTRIC Rangette, excellent for apartment use, \$15. BU. 6-2433.

SINGER electric portable sewing machine, \$30. Seabreeze ironer, \$35. Oak desk, \$30. Mirror 36" x 24", \$15. All in perfect condition. CR. 8-4513.

WASHING machine, perfect working condition, 60 cycle, \$40. CR. 8-1275.

GIRL'S bike, 21" frame, maroon colour, good condition, \$20. RO. 7-1786.

BED—pineapple poster - single, solid walnut, with spotless mattress and spring. Also matching chest of drawers, solid walnut desk 36 x 20 shelves and drawers, drapes, custom-made for bay window, rose bengaline. Also other odd drapes, cherry table, one drop shelf and one drawer, rangette. BE. 3-9619 or call at 5 Mulgrave Drive, Bloordale.

WASHING machine in good condition, \$35. Wringer needs gear. Call evenings or weekends, ST. 8-6988.

CARS FOR SALE

'52 **AUSTIN** Somerset, body and chrome perfect, mechanically sound, a good looking and reliable car. LE. 2-7184.

'52 **STUDEBAKER** hardtop, motor overhauled. \$100 down and take over payments. 46 York Street, Malton.

'51 **CHEVROLET**, first class condition. Will accept reasonable offer. BU. 6-8809.

'57 **SUNBEAM** MK III sports saloon. Excellent condition, two-tone, overdrive and radio. VI. 5-4123.

'56 **CHEVROLET**, two-tone, V-8, fully equipped, hydramatic, extras. \$300 and take over payments. GL. 1-6638.

'48 **CHRYSLER** Windsor, new motor with 12,000 miles, excellent body, \$95. CR. 8-9572 after 6 p.m.

'53 **HILLMAN** Saloon. CL. 1-9362.

'53 **METEOR** sedan delivery, new engine and 1951 Studebaker sedan. Both have radios, very reasonable. BU. 6-2285.

WANTED

HIGH chair, good condition. LE. 6-8596.

OUTBOARD motor, five hp to seven hp, in good condition. Will pay cash. Ernest Currell, 24 Cullford Road, Weston.

USED boat, 14' long, will pay up to \$100 cash. RO. 9-4954 after 7 p.m. or weekends.

YOUNG couple, no children, abstainers, wish to rent one or two bedroom house within 20 miles of Malton. OR. 3347, Bob.

FRIG and washer and living room furniture. BU. 6-2285.

MISCELLANEOUS

'57 **CHEVROLET**, four-door, two-tone, automatic, undercoat, unmarked, would exchange for '57 Zodiac, Zephyr or similar. CH. 4-2406.

LOST — Wristwatch, Monarch, blue band, somewhere in vicinity of south parking lot. Reward. RO. 6-2772.

PROPERTY FOR SALE

THISTLETOWN, 1½ storey brick home, three bedrooms, four-piece bathroom, oil heat. 5% NHA mortgage carries for \$69 per month including principle, interest and taxes. Real stone fireplace on fully landscaped lot 150' x 50', near schools and buses to Weston. Price, \$13,900. CH. 1-7860.

REXDALE Kipling Heights, 1½ storey, 19 months old house, on 45' x 120' lot, three bedrooms, two bathrooms, decorated, sodded and fenced, storms and screens, oil heat. NHA mortgage carries for \$37 including taxes, reasonable. CH. 4-7290.

SPLIT level house on Ravine lot. Four bedrooms, two bathrooms, Sunnydale Acres, \$3,000 down. CH. 4-2867.

FIVE-ROOM bungalow, new, modern, attached brick garage, at Milton, 20 miles from Avro. New 401 highway being built within very short distance. Low down payment. Reg. Moyne, 228 Riverplace Cres., Milton. TR. 8-6714.

SUBURBAN lot 100' x 200' near King City, ¼ mile from Highway 400. Drilled well on property, \$2,500. CH. 1-9618.

TWO excellent corner building lots. 100 x 207, six miles south of Newmarket on Don Mills Road. Roads in, \$1,500 each. Cash or terms. ME. 3-1936.

ACCOMMODATION AVAILABLE

THREE large rooms on main floor, all conveniences, heavy duty wiring, heat and electric supplied. Suit business couple. Prospect 3-5544.

TWO-room top flat, equipped, heating, hydro included. Situated Burnhamthorpe and Martin Grove. BE. 2-1880.

THREE-bedroom bungalow located in Milton, oil heated, garage, stove and frig included if desired. AT. 9-2443, Cooksville.

MODERN new two-bedroom bungalow in Malton. Garage, oil heat, \$110 monthly. CH. 4-7532.

TWO separate rooms to rent. Gentlemen preferred, breakfast given, also home privileges. BE. 3-8157.

BATHURST manor, basement, three-room apartment, private entrance. Electrically equipped, parking, TV outlet. Child welcome. 186 Brighton Ave. ME. 3-0675.

TWO housekeeping rooms, for rent, furnished or unfurnished. BU. 6-4693.

CAMPBELLVILLE — Five-roomed house, hydro, furnace, ½ acre, garage, garden. \$45 per month. Vacant Feb. 20th. ULster 6-9872, Rockwood.

ROOM and board—English home, available now, suit two gentlemen. Private bath and private entrance. Apply 4 Joseph Street, Brampton.

Camera-Eye Views of Festival Highlights



THE START of the big game between Avro and Orenda on the recent Hockey Festival Night is shown above. Joining their team captains for the official face-off are: W. R. McLachlan, in his capacity as President and General Manager of Orenda, left; with Orenda captain, Bill Chard and J. L. Plant, Executive Vice-President and General Manager of Avro, with captain Pat Williams. Fred T. Smye, right, Executive Vice-President of A. V. Roe Canada's Aeronautical Division, drops puck to start game.



THE FINISH of a hotly-contested game in which Orenda showed their vaunted power in the third period to win handily by a 5-3 score, is seen above. Fred T. Smye presents the Crawford Gordon Trophy to Orenda captain Bill Chard for the second straight year. The Ben Harris Memorial Trophy, honoring the late Orenda coach, was awarded to Dave Irons of Orenda as the player who best combined ability with sportsmanship on the night's play. Trophy was presented by Mrs. Harris.



WINNER OF THE CAR was Jack Farmer of Avro's Manufacturing Division, shown above receiving the keys from Mrs. Fred T. Smye.



OTHER PRIZEWINNERS included nine-year-old Peter Slazman, left, seen with his uncle, Bill Hogg, winner of the Hi-Fi set. Mrs. Elsa Lincoln, whose husband Fred is at Orenda, won the tape recorder, while Margaret Currie, 9, shown with dad, Bob Currie of Avro, won the Movie outfit.



RECORD CROWD, part of which is shown here cheering an Avro goal, attended this year's festival. Over 12,000 tickets were sold and over 9,000 fans picked up their options for outstanding hockey exhibition.



TED PARKER, son of Charlie Parker of Avro Manufacturing, won one of the bicycles.



YOUNG ED DLUTEK, son of Avro's Al Dlutek, is seen straddling the bike he won, and for which he will have to grow a bit.



ON GUARD IN CANADA...IN EUROPE...
AND FOR THE FUTURE...THE AVRO ARROW



From the first flight of the Mark I CF-100 in 1950, the development and performance of this all-weather interceptor for the Royal Canadian Air Force has won for it the role of front line defender in North America and Western Europe.



The Avro Arrow, recently unveiled, begins an intensive pre-flight testing program. Under development for the interception role of the RCAF in the new North American Defence Command, the Arrow will have supersonic mission capabilities.



AVRO AIRCRAFT LIMITED

MALTON, CANADA

MEMBER: A. V. ROE CANADA LIMITED & THE HAWKER SIDDELEY GROUP