

Still likely to be Canada's next major air defence weapon is the Avro Arrow, a Mk. 1 version of which is seen here taking off at Malton.

THE AIR FORCE

The Role Remains the Same but Government Indecision Makes The Future Method Uncertain

AT NO TIME since the end of World War II has the RCAF faced a future filled with so much uncertainty about matters of crucial importance. This uncertainty stems from, not what the RCAF's future role is to be, but how it is to fill that role.

It is becoming abundantly clear that within Air Force circles there is no uncertainty about how the air defence role is to be performed. It is unfortunate that the Air Force itself is not able, because of its status as a servant of the political arm of the Government, to make its feelings known on this subject. Such action, if it were possible, would put an end to the confusion caused by the Government's inability, or lack of desire, to reach a decision on the question of whether or not it should order the Avro CF-105 Arrow into production for the RCAF as a successor to the CF-100.

Big Figures: By means of the improbable suggestion that the possible change in defence policy (as indicated in the Prime Minister's statement of

Sept. 23) is based on the best advice of the Government's military advisers, the Cabinet is attempting to make it appear that its indecision springs from honest doubt about the Arrow's potential as an air defence weapon from 1960-61 onwards. The more likely reason is simply that the Cabinet is appalled by the unit cost of the Arrow.

Government statements and implications regardless, the following facts cannot be ignored:

- RCAF planners, some years ago, laid down a requirement for a long range supersonic all-weather fighter. This requirement still exists; it has never been cancelled.
- An overwhelming body of expert opinion, in the U.S., the United Kingdom, Canada and, apparently, Russia, see a continuing need for manned aircraft in the air defence complex.

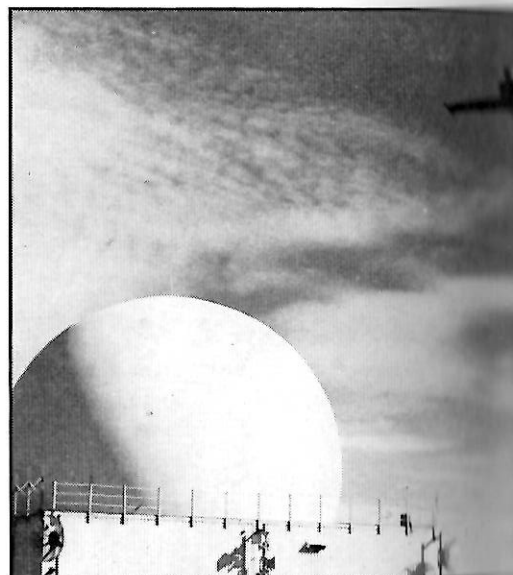
Thus it would appear that, if the Government decides next March against buying the Arrow, its decision will be based on purely economic and political reasons. Such a decision could

not be justified militarily.

The current controversy over the respective merits of guided missiles vs. manned aircraft has led to some confusion in the public mind that the possible resolving of this conflict of opinion in favor of a switch in emphasis to missiles, would somehow mean a fundamental change in the Air Force's stated purpose. This is not so. While the widespread introduction of ground-to-air guided missiles as prime air defence weapons would certainly bring about drastic changes in the Air Force's method of performing its basic function, this function would remain as before: to defend Canada and, therefore, North America from air attack.

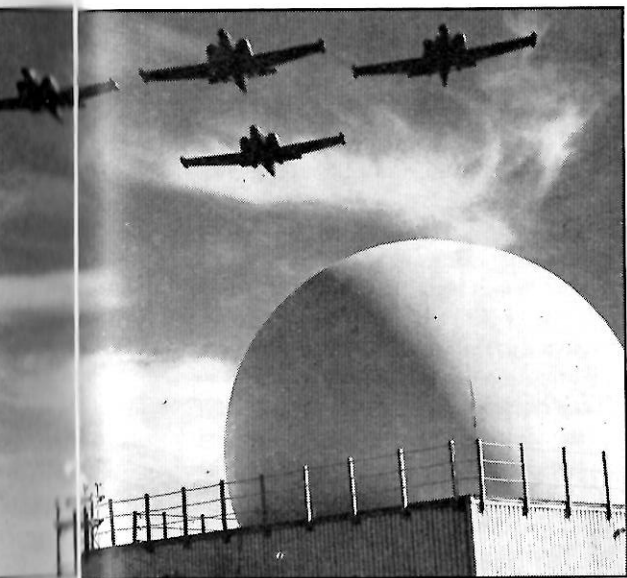
Day to Day: And while the arguments rage to and fro, compounding the confusion, the Air Force continues its day to day routine, adapting to meet problems and demands as they arise.

Little noticed in recent months, has been the fact that, through retirements, death, and transfers of high ranking RCAF officers to important posts with-



Sabre 6's of the RCAF's No. 1 Air Division, once the best in the skies of Europe, no longer have unchallenged supremacy. Government must soon select a replacement.

Current mainstay of Canadian air defences is aging CF-100. By the time the Arrow is available, CF-100 will be at an advanced stage of obsolescence.



General Earle E. Partridge, USAF, (left), and Air Marshal C. R. Slemon, RCAF (right), respectively commander and deputy commander of NORAD.



The familiar T-Bird has many years of life ahead of it in Training Command; in it, thousands of RCAF pilots have received their introduction to jet flight.

in the NATO and NORAD organizations, the Air Force hierarchy has seen some drastic changes. For instance, at the very top level, within the five-man executive body of the Air Force, there are three new faces:

- Air Vice Marshal D. M. Smith, formerly chairman of the Canadian Joint Staff, London, is now Vice Chief of the Air Staff, succeeding . . .

- Air Vice Marshal C. R. Dunlap, who was posted to Supreme Headquarters Allied Powers Europe (SHAPE) as Deputy Chief of Staff, Operations, with the acting rank of Air Marshal.

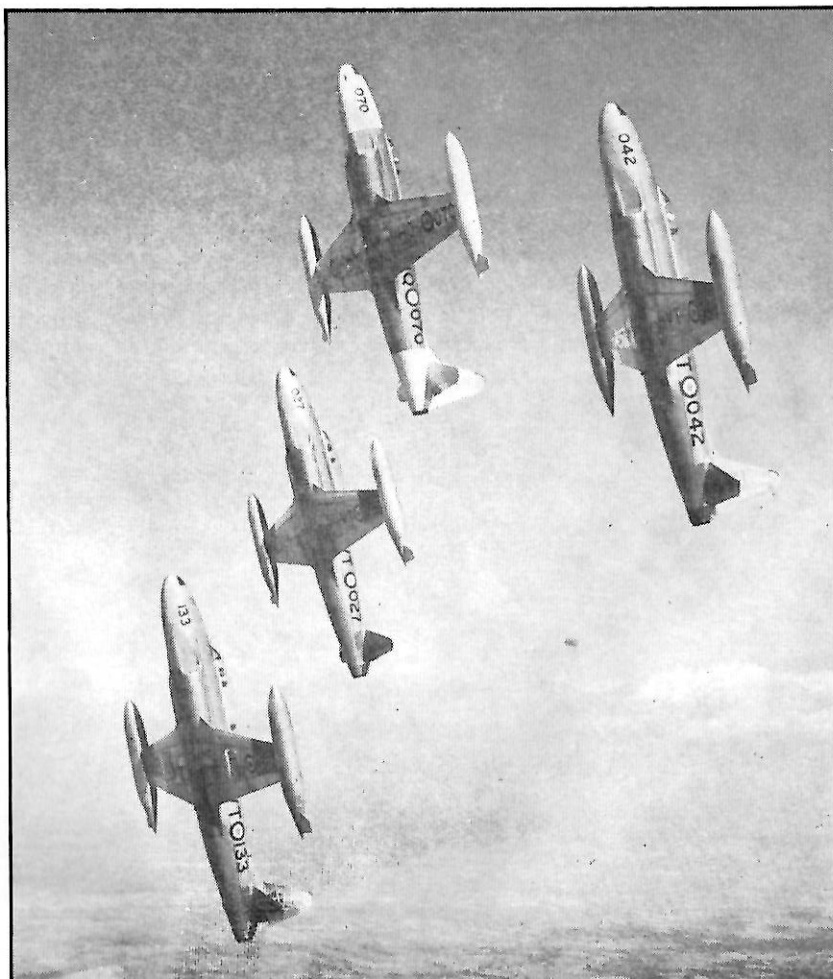
- Air Vice Marshal John A. Easton is now Air Member for Technical Services, succeeding . . .

- Air Vice Marshal M. M. Hendrick, who was posted to Washington as chairman of the Canadian Joint Staff there.

- Air Vice Marshal Isaac C. Cornblat is now Comptroller, succeeding . . .

- Air Vice Marshal W. E. Kennedy, who died suddenly, Oct. 18.

Other high level changes saw the





An RCAF Sikorsky H-34 is shown hauling a Bombardier to a Mid Canada site. Most of this supply work is now carried out by civil operators.

following senior officers moving on to new positions:

- Air Vice Marshal L. E. Wray, from AOC of Air Defence Command to AOC of 1 Air Division in Europe, succeeding Air Vice Marshal Harold Godwin, who has retired.

- Air Vice Marshal W. R. MacBrien, from Chief of Operations, AFHQ, to AOC of Air Defence Command.

- Air Commodore W. I. Clements, from Chief of Personnel, AFHQ, to AOC of Maritime Air Command, succeeding Air Commodore Martin Costello, who has retired.

- Air Vice Marshal Clare L. Annis, from Chief of Telecommunications, AFHQ, to AOC of Air Materiel Command.

- Air Vice Marshal Keith L. B. Hodson, from Chief of Organization & Management at AFHQ, to Deputy Chief of Staff (Operations), NORAD Headquarters.

Maritime Air Command: MAC assumed new stature in May, when it took delivery of the first five CL-28 Argus maritime patrol aircraft, widely regarded as the finest anti-submarine

aircraft in the world currently in service. Since that time, additional CL-28's have been delivered at regular intervals.

First squadron to be equipped is No. 405, based at Greenwood, N.S. As the Argus's are delivered, they replace 405's Neptunes, which are in turn being turned over to 407 Squadron, based at Comox, B.C. The Neptunes provide 407 for a more modern replacement for its Lancaster IOMRs, which are being retired from operational service.

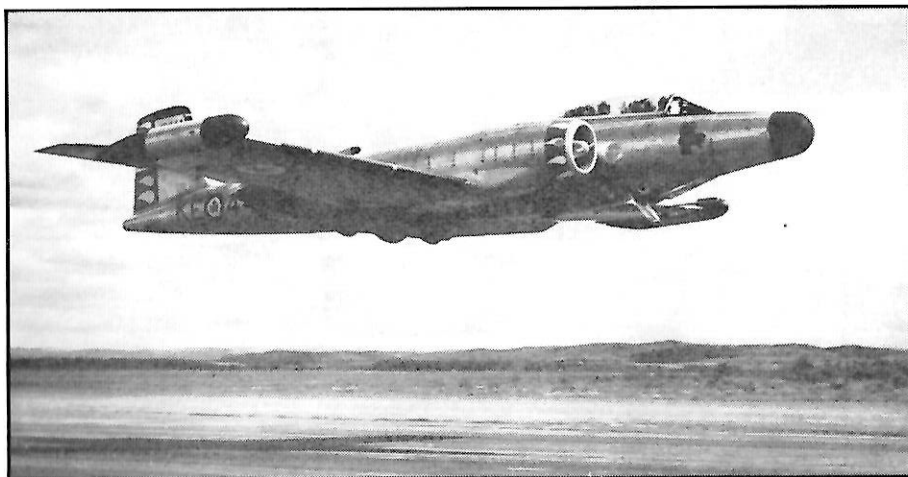
The other of the three maritime squadrons which comprise the operational arm of MAC is 404, also based at Greenwood. Current plans call for the transfer of one of the two Greenwood squadrons to Summerside, P.E.I. Summerside is now the home of the Maritime OTU, which will be transferred to Greenwood.

The introduction of new aircraft on Maritime operations reflects the growing recognition being given by defence planners to the submarine threat. Also reflecting this increased emphasis on anti-submarine operations is the big program of expansion and improve-

ment of facilities at Summerside and Greenwood, costing a total of \$15,000,000, just about equally split between the two bases. (For more on MAC, see "The Enemy Below" elsewhere in this issue.)

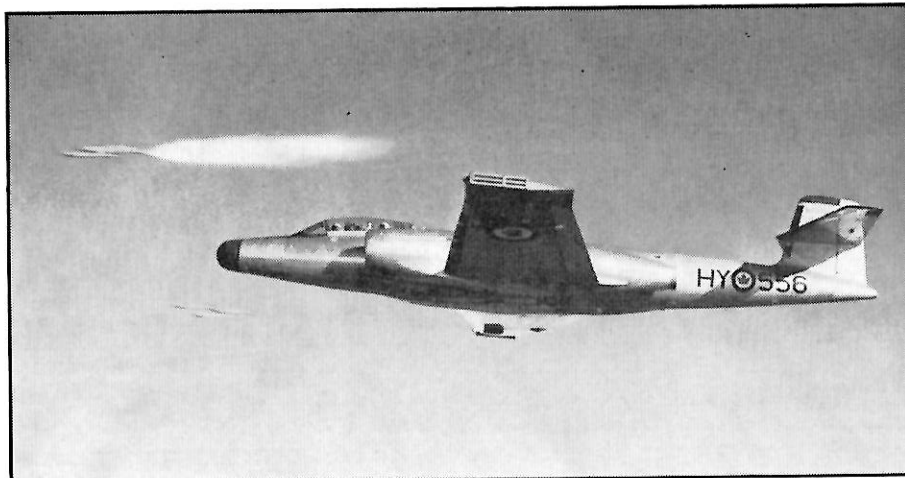
Training Command: The end of NATO training and the completion of the build-up of RCAF aircrew strength, are expected to result in a significant reduction in activity in Training Command during the next year. Reflecting this reduced activity is the announced plan to transfer some 2750 personnel from this Command to other Air Force Units. Present strength of Training Command is just over 15,000.

Training of RCAF aircrew has now been reduced to an annual rate of 240 pilots and 170 observers. The last group of NATO trainees will graduate next month, though the training of 360 German pilots . . . which is being carried out under a separate agreement . . . will not be completed until early in 1959. By the end of the program in December some 5575 aircrew from NATO countries will have been trained by the RCAF.



An Air Defence Command CF-100 scrambles on a mission to investigate an "unknown". ADC operates nine squadrons of CF's in Canada.

CF-100 participating in recent rocket shoot at Cold Lake lets six rockets go. In practice firing, only six rockets are used for economy.



Plans call for RCAF Station Claresholm, Alta., to be closed down this year, and Macdonald, Man., next year. And some time next year, Training Command HQ will be moved from Trenton to Winnipeg.

No. 1 Air Division: The 6500-man Air Division, operating eight squadrons of Sabre 6s and four squadrons of CF-100s, continued to meet Canada's NATO commitments in Europe. Standards of training and performance remain high, but the Air Division's effectiveness is rapidly diminishing in direct proportion to the aging of its aircraft.

Future of the Division should become clearer after the annual NATO Council meeting in Paris next month.

It is generally recognized that the Division will have to be re-equipped, but what form this new equipment will take is still up in the air.

General Lauris Norstad, Supreme Allied Commander in Europe, said recently that the number of missile units in Europe will be expanded, with a consequent elimination of 30 to 40 conventional aircraft squadrons. This does not necessarily mean that any

Canadian squadrons will be eliminated, but Gen. Norstad's statement points that way because, generally speaking, Canada's NATO partners are getting more advanced aircraft than the RCAF. On the other hand, it was indicated some time ago that NATO wanted the Air Division to retain its present role, that of a front line, high level interceptor force. This could only mean re-equipment with new, more advanced aircraft. The Lockheed F-104 has in the past been frequently mentioned in this connection.

Air Transport Command: ATC can look forward to a future of increasing activity, in which growing demands for its service will be met with new equipment in the form of two new types of turboprop transports, both currently being built by Canadair Ltd. These are the long range CL-44 military transport (based on the Bristol Britannia and powered by four Rolls-Royce Tyne), and the short/medium range CL-66, a turboprop conversion of the Convair 440 Metropolitan (powered by two Napier Elands).

Next year, coincident with the transfer of Training Command HQ from

Trenton to Winnipeg, ATCHQ will move from Lachine, P.Q., to Trenton.

With the scheduled disbandment of Tactical Air Command in January of next year, ATC will assume command of all regular force units now within TAC.

The Auxiliary Force: By the end of this year, all RCAF auxiliary squadrons will have been re-equipped to perform the new military liaison and civil defence role in which they have been recast.

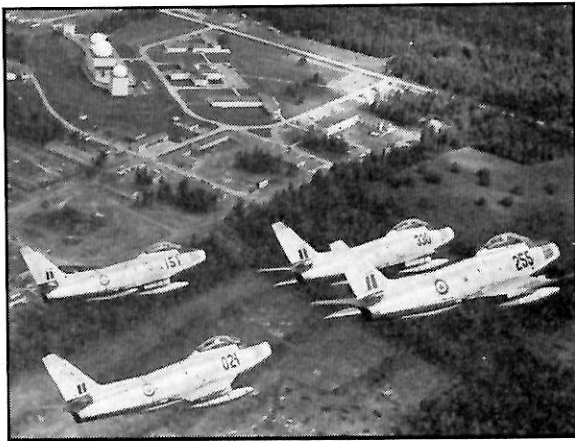
To carry out this new job, the squadrons are being equipped initially with Expeditor light transports, and eventually most of them will also get Otters and Bell helicopters.

The regular force component of each squadron has been reduced to four officers and about 20 ground crew. Pilot strength for each squadron is unchanged, but 12 navigators will be added to each roster.

As part of the general reorganization, auxiliary units have been placed under the command headquarters nearest to their geographical location. That is, the Toronto and Hamilton squadrons will come under ATC;

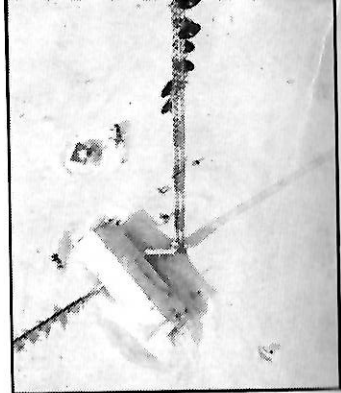
An Otter on United Nations duty, one of four with the RCAF's 115 Communications Flight, shown following landing at El Tor in the Sinai Desert.



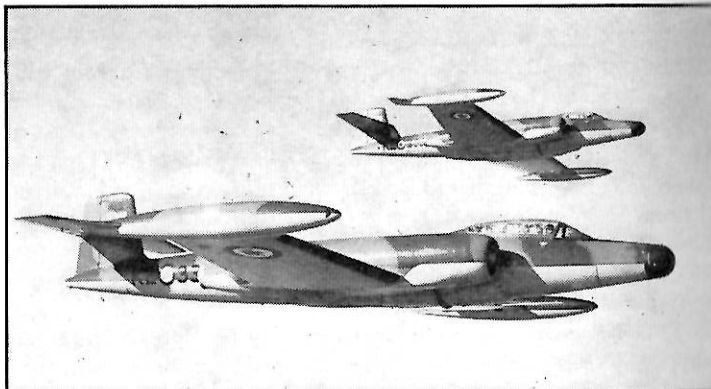


Four CF-100 squadrons are on duty in Europe to give the RCAF's No. 1 Air Division an all-weather capability. There are also eight Sabre squadrons.

Sabre 5's from the RCAF's Fighter OTU at Chatham, N.B., circle over one of the radar stations in the Pinetree Line.



An important part of North America's early warning system: a typical Mid-Canada 300-foot microwave tower.



Winnipeg, Calgary and Edmonton under Training Command; Montreal under ADC, and Vancouver under 5 Air Division.

Air Defence Command: The muscle arm of Air Defence Command, the nine CF-100 squadrons, this year reached their fourth year of full operations.

Proof that ADC had shaken down into an efficient force for defence was evident in the accident rate, which continued its downward sweep. Major accidents were down in the past year by 50%.

Viewed in the light of the four new squadrons which took their place on the line, replacing those which joined the Air Division in Europe in 1957, the accident rate is significant. The four squadrons, starting from scratch, had to reach operational status quickly, and novice crews welded into units capable of taking their place on the line.

In May of this year the RCAF's nine squadrons were placed under the operational control of NORAD. Immediately the planners began ironing out differences in terminology concerning operational instructions of both air forces, and by August of 1958 the NORAD staff at Colorado Springs

had placed some 30 RCAF personnel in the joint staff.

Cross border training between northern U.S. based air defence squadrons and the RCAF interceptor squadrons continued, and the F-102 supersonic interceptor and the F-89J and the F-86D type fighters were a familiar sight on RCAF bases. The training reached a point where the F-102s could land and refuel and be turned around at bases such as North Bay in the same time it took RCAF crews to turn around a CF-100.

More Radars: The Government announcement in September that the RCAF would be equipped with two squadrons of Bomarc missiles in 1961, caused considerable comment from all quarters. Lost in this announcement was the fact that additional radars had been also authorized. This will give the Air Defence system more northerly interception capabilities.

The Mid-Canada Line passed its first complete year of operations. The continual refining of procedures to make this electronic fence as discriminatory as possible occupied most of the effort on the MCL. Exercises, using the line as a scrambling facility, were conducted throughout the year with great success.

Of interest is the fact that large

flocks of migratory birds can be detected by the line, since the sensing mechanism can be turned to fine discriminatory degrees. Personnel at the Research division of ADC Headquarters, under Dr. George Lindsay of DRB, conducted many surveys and experiments in order to extract the maximum capability from the line.

Many air exercises were carried out between the RCAF and the other applicable NORAD forces using the SAC bombing force as intruders. Main point of all the exercises is to utilize full Electronic Counter Measures (ECM) in the operations both for and against the attacks. Held at hours that would curl the hair of an ordinary eight to five man, they were sprung unannounced against all elements of the system. From a publicity standpoint, the exercises produce little, since the results are classified for understandable security reasons. Nevertheless, they cannot help but increase the efficiency and capability of the air defence system, as each segment grows more familiar with all aspects from the usual to the unusual. While Strategic Air Command provide the main target, CF-100's and the Comet aircraft provide small sneak raid forces aimed at particular points in the defences.