

THE AIRBORNE SERVICES

More Radar Sites

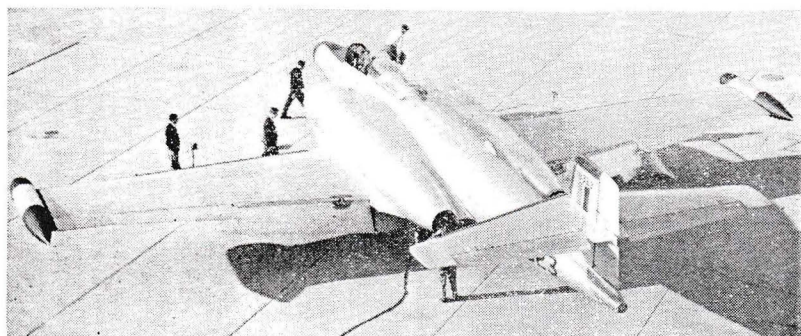
A new U.S.-Canada agreement provides for the construction of additional radar stations to strengthen the southerly Pinetree line. They are to be built (with U.S. funds) in Labrador, Newfoundland, Nova Scotia, Ontario and British Columbia. Previously, Canada footed one third of construction costs for Pinetree stations.

The Labrador-Newfoundland stations, extending along some 600 miles of coastline, will fill a gap between the Pinetree line and the Mid-Canada, the latter lying roughly along the 55th Parallel.

Saskatchewan. In a 10-day hunt, involving 12 RCAF and 11 commercial aircraft, 986 hours were flown over more than 240,000 square miles before the wreckage was spotted on a small lake with one of the two-man crew surviving.

Ferrying Resumed

The RCAF's St. Hubert-based 1 Overseas Ferry Unit is back in business again, delivering factory-fresh Sabre VI interceptors from Montreal to the four-wing Air Division in Europe. It is estimated that by the end of 1956 its 30-odd pilots will have ferried about 700



CF-100, MARK FIVE: The latest version of Avro Aircraft's CF-100 features extended wingtips and tailplane. About three feet of extra wing has been added to each mainplane and the stabilizer span has been increased. Net effect of these modifications has been to increase the operational altitude of the aircraft to over 50,000 feet . . . to as high as 55,000, according to some reports.

Busy S & R Year

More than 375 missions totalling 5,460 flying hours were flown during 1955 by RCAF aircraft on search and rescue detail. There were 160 mercy flights, about 50 searches for missing or distressed aircraft, scores of patrols for distressed and missing marine vessels. It was Search & Rescue's busiest year on record.

Search & rescue aircraft operating from bases east of the Great Lakes accounted for 2,720 flying hours, during which 86 mercy flights were completed, mostly into Arctic regions. In Western Canada, RCAF aircraft carried out 74 mercy flights, handled mostly by Edmonton and Vancouver rescue centres.

One of the largest searches began near the end of September, when a York aircraft of Associated Airways, Edmonton, disappeared somewhere north of Lake Athabasca in northern

aircraft, including four squadrons of Avro CF-100's to give the Air Division all-weather capability.

Since its establishment in October, 1953, the unit has suffered no fatalities and has lost few aircraft. Three Sabres were burned after one jumped its chocks when being started and ploughed into the others. It claims a delivery speed record of 45 hours from St. Hubert to 4 Wing at Baden-Soellingen, Germany.

Theory Under Fire

The air-atomic concept of war held in common by the air forces of Canada, the U.S. and Britain has come under heavy fire recently by Canadian military men.

Speaking in Halifax, Lieutenant-General Guy Simonds, former Chief of the General Staff, denounced as dangerous the theory of threatening massive retaliation as a deterrent to enemy

attack. He urged a "balanced strategy" to deal with a variety of war situations. (In another public address the General criticized heavy orders for the Mark 5 high-altitude version of the CF-100 as money down the drain. The aircraft would be obsolete before it could be placed in service, he said).

Writing in a national magazine, Major-General W. H. S. Macklin, former Army Adjutant-General, spoke of defence policy-makers viewing atomic warfare as if it were the only possibility of future wars. "This has led them into the building of a great air defence system that probably can't protect us from the very danger they envision," he wrote. "Its cost prevents us from augmenting our valuable, flexible air power in Europe. It has delayed the modernization of the regular army . . . It has limited the expansion of the Navy."

The Canadian Army Journal, in an article prepared by the historical section of the General Staff, says a Korea-type war is much more probable than a world-wide nuclear conflict.

New Simulators

The first of five Sabre 6 flight simulators ordered from Redifon Ltd. of London has been turned over to the RCAF. Housed in a 36-ft.-long, 12½-ton trailer, the device is equipped with a ground control approach recorder providing a complete record of each simulated flight. By a system of pens the pilot's flight is traced on cards. These cards can be discussed by an instructor with the student on completion of the exercise.

Some mobile simulators are now in use by 1 Air Division in Europe, but with Sabre 6's steadily replacing the Sabre 5 a requirement exists for the latest model. In Canada, static Sabre 5 simulators are in service at 1 (Fighter) Operational Training Unit at Chatham, N.B.

Quadradar GCA

A new, low-cost, readily portable ground control approach unit, made by Gilfillan Bros. Inc. of Los Angeles, is undergoing operational tests at the RCAF detachment at Churchill, Man. It was flown there from the manufacturer's plant. After the tests it will remain at Churchill.

Designated as Quadradar, the equipment combines in one unit weighing less than a ton the functions of four

radar systems. A search system is used for initial recognition and guidance to the glidepath. A precision approach system shows altitude, range and bearing and position in relation to the path line, following the aircraft to final touchdown.

A third system directs the aircraft along the taxi strip once it has landed. A height-finding system has a greater elevation range than the search system and is used for directing the approach of such aircraft as jets (approaching from 40,000 feet) and helicopters making near-vertical landings. It also provides elevation information to aircraft flying in the area of the airfield.

Quadradar is intended to supplement rather than to replace present GCA facilities by providing, at much lower cost, equipment for smaller airfields handling lighter traffic and for tactical operations where mobility is vital.

Helped or Hindered?

RCAF and U.S. Air Force sources were at variance last month in their versions of a well-publicized incident over Ohio in which an RCAF CF-100 bound for Florida was escorted to an airfield by a USAF Sabre. RCAF sources were quoted as saying the CF-100 was forced down, USAF sources were quoted as saying their Sabre was lending assistance because the CF-100 was experiencing radio trouble.

In any event, this is the USAF report: The 662nd Aircraft Warning Squadron at Brookfield, Ohio, received a call from a Canadian radar site reporting that a Canadian interceptor, bound for Eglin Air Force base in Florida, was experiencing some radio difficulty and probably needed navigational assistance.

The Air Defence Command station at Youngstown sent up a Sabre, which located the Canadian plane. The U.S. pilot wagged his wings and pounded on his flying helmet as the signal that he was there to lend his navigational assistance.

The Canadian jet followed the Sabre when it eventually turned and headed for Youngstown. When the Canadian pilot landed he was distressed that he had been "forced" to land.

Incidentally, the CF-100 was one of three on a "secret" flight reportedly for USAF evaluation. When they arrived the Eglin base newspaper promptly published a picture and story of the visit.

Psychomotor Tests

The U.S. Army Aviation School at Fort Rucker, Ala., is testing a four-action mechanical device designed to supplement oral and written examinations given to prospective cargo helicopter pilots. It's called a psychomotor. More than \$3,000,000 has been spent on development. Tests will continue from six to 12 months.

What is called a complex co-ordinator requires a student to line up a green light opposite a red light which may appear on the control panel. This

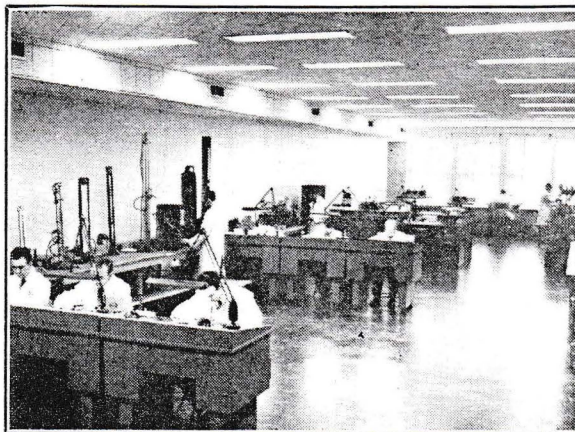
is accomplished by moving stick and rudder pedals, causing the green light to move and appear opposite the red, holding it in this position until a new pattern appears.

The rudder control stimulates the action of a plane on the ground, requiring the student to stabilize the aircraft until it has become airborne.

The rotary pursuit resembles a phonograph turntable and checks ability to follow a moving target. The turntable has a small magnetic disc off-centre and a score is accumulated

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