

equipment. Exports to other foreign countries increased by nearly a half over the October-December 1962 total, the large wheat shipments adding to this total, and imports, spread over a wide diversity of commodities and countries, rose by 13.8 per cent. There was a sizeable export trade balance estimated at \$176,400,000, compared to that of \$164,800,000 for the fourth quarter of the preceding year.

TRADE BY REGIONS

Trade between Canada and the United States remained at a high level in 1963. Total Canadian exports thereto were valued at \$3,913,200,000 and imports therefrom at \$4,457 million, both records in Canada's commerce with the United States and representing gains of 4.5 per cent and 3.7 per cent, respectively, over totals in the preceding year. The increase in exports was gradual throughout the year, while imports picked up only in the last half. Increased economic activity on both sides of the border was reflected in added demands for goods and materials. There was a slight decline in the import balance of trade, which was estimated at \$543,800,000 for 1963 versus \$554,900,000 in 1962.

Trade with Britain showed a gain of 10.3 per cent in total exports and a decline of 6.3 per cent in imports. Exports were high throughout the year, while imports, which were sharply lower in early 1963, turned upwards only in the last quarter. Total exports to Britain were valued at \$1,014,900,000, which figure was only once surpassed and then in 1944. There were important gains in large shipments of wheat, nickel, copper, uranium, lumber and iron ore, while deliveries of aluminum, wood pulp, platinum and oilseed were well maintained. Imports dropped to \$527,500,000 and, except for estimated gains in machinery, electrical apparatus and wool, most of the chief items were at lower levels than in the preceding year. The export surplus in Canada's trade with Britain increased to \$487,400,000 compared to \$356,900,000 in 1962.

Trade with other Commonwealth and preferential-rate countries advanced considerably in 1963, exports thereto rising by 18.9 per cent over the preceding year and imports therefrom increasing by 27.4 per cent. Exports gained throughout the year, particularly in the first half, and totalled nearly \$400 million. The main increases in imports were in the latter part of 1963 and total imports from this group for the year rose to \$405,800,000, to which added deliveries of bauxite and sugar contributed substantially. There was a small import balance of \$6,800,000 in 1963 compared to an export surplus of \$17,100,000 in the preceding year.

RCAF PHOTO-RECONNAISSANCE

To help fulfil NATO's photographic-reconnaissance requirements, two of the CF-104 squadrons of the Royal Canadian Air Force in Europe have been converted from a strike role to a "photo-recce" role. These squadrons, based in Marville, France, will be equipped with the latest photographic equipment available. Since aircraft, to survive, must fly over defended territory either at very low or very high altitudes,

the CF-104 is well suited to the photo-recce role, as it can, in poor weather, navigate at low level to a target and return, and can obtain photographs under adverse light conditions at altitudes of 200 feet or below.

DESCRIPTION

At the request of the RCAF, Computing Devices of Canada, working from set specifications, developed the Vicom Air-Photo System, which is integrated with the electronic system of the CF-104. The "pod", as the camera installation is called, consists of four 70-mm cameras enveloped in an aluminum aerodynamically-contoured mount, which is attached to the belly of the aircraft amidships.

The photo system's automatic features, such as the automatic-exposure control that adjusts the exposure as light conditions vary, permit the pilot to concentrate on flying the aircraft - a most exacting task in low-level, high-speed operations. As he approaches the target area, the pilot selects the camera or cameras he intends to use. This automatically opens the protective doors over the camera windows and activates the automatic-exposure control. As he passes the target, the pilot depresses a button on the control column and the selected cameras operate.

Equipped with this sophisticated air-photo system, the CF-104 photo-recce squadrons will perform a vital role for NATO. In today's world of intercontinental ballistic missiles, mobile missile launchers and nuclear-equipped field artillery, the rapid acquisition of information on the movement of enemy weapons is of vital importance.

EAST COAST NAVIGATION AID

Shipping in Cabot Strait, between Newfoundland and Cape Breton Island, and in the Gulf of St. Lawrence is now being served by a Decca Navigator chain. This navigational aid comprises three main elements: a chain of land-based transmitting stations - usually three or four; a receiving and indicator unit aboard the ship being guided; and a special marine chart. On receiving signals from the shore stations, the shipboard unit automatically indicates the vessel's position in relation to the chart.

The position-fixing installation, formerly the West Newfoundland chain, has its master or controlling station located on Grindstone Island, Magdalen Islands, Quebec; its "slave" stations are at Antigonish, Nova Scotia, and Port aux Basques, Newfoundland. The chain formerly serving in this area was located with its master and slave stations on the west and south Newfoundland coasts. The engineering and installation of the new chain, with greatly improved equipment, was carried out at a cost of \$800,000 by the Telecommunications and Electronics Branch of the Department of Transport.

The system is used mainly for general marine navigation, but it is also employed by fishermen in their operations and for salvage, cable laying, hydrographic survey and other marine purposes.