THE INDUSTRY

Collins UHF for RCAF

A production contract valued at $8,300,000 for UHF airborne transceivers, has been placed with Collins Radio Co. of Canada Ltd. by the Department of Defence Production, acting on behalf of the RCAF.

The RCAF has planned a conversion from VHF to UHF communication for some years. After exhaustive evaluation of available equipment, the Air Force selected the Collins-designed AN/ARC-52. This radio has been adapted to meet RCAF requirements and will be known in Canada as the AN/ARC-552.

Air Vice Marshall J. L. Plant, executive vice president of Collins of Canada, expects that over 90% of the components will be produced in Canada and that 50% of the contract will be subcontracted.

The AN/ARC-552 is a UHF Transceiver employed in air-to-ground and air-to-air communications. Used in Canadian aircraft, it will replace earlier VHF equipment used for a similar purpose. The AN/ARC-552 provides a total of 1750 channels over the range of 225 to 400 mc. While all are available to the pilot, 19 are preset and available for instant use. In addition, an entirely separate guard channel is always available for emergency or search-rescue use.

The Canadian ARC-552 is directly interchangeable with the U.S. developed ARC-52, being an adaption of the latter for Canadian requirements. Both equipments represent a major advancement over earlier equipment in service use. Though one-third the weight, and one-half the volume, the equipment has improved sensitivity and greater power output. Both factors increase the service range under severe propagation conditions.

The equipment makes use of the latest assembly techniques. Printed wiring reduces manufacturing cost; modular construction reduces maintenance; pressurization increases service life. These techniques, together with improved components now available from industry, have made possible an equipment of greatly improved reliability, Collins says.

Change of Name

One of Canada's best-known instrumentation development, engineering and production firms has changed its name and will now be known as Canadian Applied Research Limited. It was formerly known as PSC Applied Research Limited.

Besides its present plant and offices in Toronto, the firm has recently expanded into an additional area where production facilities are being installed for the manufacture of the company's larger varieties of special instruments: e.g., the Gamble Plotter for topographic map-making from aerial photographs, the Automatic Tri-Film Processor for the fast development and drying of motion picture film, and Instrumentation Cameras for all types of scientific recording needs.

The addition now provides 56,000 square feet for the firm's engineering, production and environmental test laboratory facilities.

Other news from Canadian Applied Research:

LOCKHEED JETSTAR: Lockheed Aircraft Corp. set an aviation record when they completed a 10-passenger utility jet transport after a development time of only 30 weeks. Built to fill a military transport role, the swept-wing JetStar is powered by two Bristol Orpheus engines mounted in pods attached to the rear fuselage. A second prototype will be powered by four GE J-85's.

•The Swedish Air Force has been evaluating the R-Theta Computer and reports "satisfaction and intense interest". In addition, Pan American World Airways and Scandinavian Airlines System (SAS) are said to be contemplating using the R-Theta for trans-ocean flying. The problems of polar flight navigation make the system particularly attractive to SAS.

•To assist in the development of high altitude reconnaissance aircraft, the USAF recently purchased three Canadian Applied Research Airborne Profile Recorder Systems. The Profile Recorder is an improved precision radar altimeter capable of measuring ground elevations +10 feet from 1,000 to 30,000 feet altitude. The USAF's evaluation of the original CARL Profile Recorder began six years ago.

•Wright Air Development Centre at Dayton, Ohio, has placed on its qualified products list the CARL Dual Probe Ice Detector. The Ice Detector is slated for installation on the Avro Arrow, and has also been chosen by Lockheed as basic equipment on the new Electra turboprop airliner. Evaluations on the Ice Detector are currently being carried on by TCA, BOAC (for the Comet), the Swedish Air Force, and by several large aircraft manufacturers in the U.K. and Europe.

USCAN Agreement

A reciprocal Canadian-United States sales and manufacturing exchange agreement covering a wide variety of advanced aviation products has been concluded by A. V. Roe Canada Ltd., and General Precision Equipment Corp. of New York.

The member of the A. V. Roe group principally concerned in the agreement is Canadian Applied Research Ltd. The agreement provides for CARL progressively entering into the manufacture and sale of a wide variety of GPE products in Canada. Similarly, certain GPE companies will manufacture and distribute CARL products in the U.S.

The members of the GPE group initially participating in the agreement include Link Aviation, Inc.; Kearfott Company, Inc.; General Precision Laboratory Inc.; and Askania Regulator Company as the military and special control field.

Link Aviation Inc., is the originator and developer of the concept of on-

the-ground flight training.

Kearfott Company Inc., are designers and manufacturers of precision electro-mechanical instruments and control components for aviation and industry.

Askania Regulator Co. has been a quarter-century in the manufacture of hydraulic regulators and industrial controls. More recently, the company has further extended its endeavors to include electronics, and electro-hydraulic circuits.

General Precision Laboratory Inc., is known in the field of automatic self-contained air navigation systems.

Bendix Contract

Aviation Electric Ltd., Canadian affiliate of the Bendix Aviation Corporation, reports that the company's Eclipse-Pioneer Div. has announced a new $1.1 million order from General Dynamics Corp., to equip Convair 880's with PB-20 transistorized automatic flight control systems. (See *Aircraft,* May, 1957.) The contract boosts Convair Division's ordered backlog for the new "super-sensitive" automatic flight and landing approach controls to $16.5 million.

Described as so sensitive that it appears to "sense in advance" any conditions that would cause the airplane to deviate from straight line of flight, the new device is said to be the first all-transistorized system to be certified by the CAA for commercial use. It automatically flies the plane on radio flight path, landing approaches or any course directed by the pilot.

The Canadair CP-107 Argus, is equipped with this system. In addition, the CS2F-1 Tracker built by de Havilland Canada is currently testing a prototype model.

Servomechanisms

Products designed and manufactured by Servomechanisms Inc., are now available throughout the world exclusively from Servomechanisms (Canada) Limited or Toronto. Servomechanisms designs, develops and produces electronic and electro-mechanical sub-systems, computers and components, primarily for aircraft and missile applications.

The Canadian operation is now completely housed in a new, well equipped plant in the northwestern suburbs of Toronto, near Malton Airport. The new plant contains 20,000

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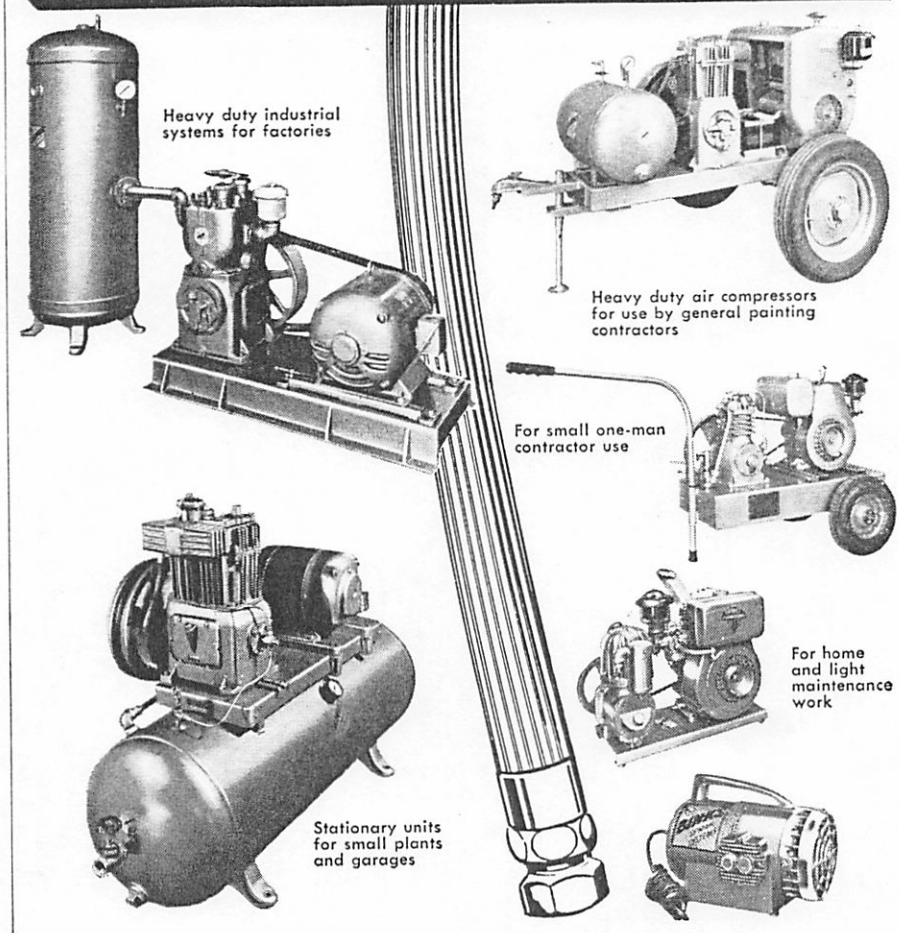

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