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APACE WITH THE PACEMAKER

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FAA Proposes Program To Develop Short-Haul Transport For Locals

A proposed Government-industry program to stimulate the development and production of an economically-feasible, short-haul, passenger-cargo aircraft has been announced by N. E. Halaby, Administrator of the Federal Aviation Agency.

The aircraft would be designed primarily to meet the needs of United States local service airlines and the short-haul operations of other airlines in this country and abroad. This market presently is dominated by the DC-3, an aircraft which dates back 27 years.

The projected program would be essentially one of Government stimulus to industry. The Government does not propose to undertake or fund the direct development of a short-haul transport. Instead the FAA would provide a basis and an incentive between the customer — private and governmental—and the producer to assure the availability

of a common airplane in sufficient production to make the vehicle economically desirable for all.

The proposed program would involve a limited design competition to produce detailed specifications and cost data for a practical short-haul transport. It is expected that this competition would produce a design which would meet requirements of several government agencies and permit fixed priced orders of sufficient numbers of the aircraft to enable the manufacturer to place it in volume production.

Concurrently, FAA also proposes in consultation with Department of Commerce and the Civil Aeronautics Board to undertake an economic analysis to better illuminate the potential market for the short-haul transport. Current estimates range from 700 aircraft to more than 1,000.

Piedmont to Help Commemorate First Flight's 60th Anniversary

December 17 is a day which has a significance that should be known to everyone connected with aviation.

It marks the 60th anniversary of powered flight, for it was on that day that Orville and Wilbur Wright became the first men to successfully fly a heavier-than-air craft. Their venture was one which changed the lives of everyone and helped shape today's modern world.

At press time it was learned that a Piedmont F-27 will participate in still another moment of history December 17 as it becomes the first commercial aircraft to land on the new landing strip near the Wright Brothers Monument at Kitty Hawk, N. C.

The landing is part of the dedication ceremonies for the recently-finished airstrip and will help to climax several days of activities commemorating the first flight.

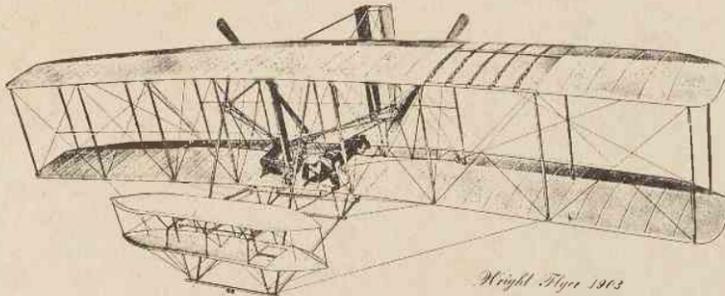
That daring venture by two young men 50 years ago has had a tremendous impact on every phase of human activity.

For more than 100 years before the Wright brothers invented the airplane, man was

earnestly trying to learn the secrets of flight. By the end of the 19th century balloons were no longer a novelty, and glider experiments were frequently in the news.

However, it was not until 1903 that Wilbur and Orville Wright flew the first successful heavier-than-air craft. The story behind the reasons for their success, when so many others failed, makes an interesting chapter in the history of transportation.

Probably the most important contribution to their success was their development of entirely new air pressure tables. All other experimenters up to that time were basing their designs on widely-used inaccurate air pres-



Wright Flyer 1903

sure tables that never would have led them to success.

Through various wing shapes, the Wright brothers discovered these inaccuracies and corrected them, thus enabling anyone who used their tables to design a flyable aircraft.

A second reason for their success was their discovery that balance, elevation, and steering could be controlled by moving various aircraft surfaces in flight. Other experimenters had achieved a minimum of flight control by moving their arms or bodies to shift their weight and thus affect balance.

Flight Control

The Wright brothers devised

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DME Units Installed To Meet Prop-jet, Piston Deadlines

Months of testing and training by a number of the INT Radio Shop staff will soon be climaxed as Distance Measuring Equipment (DME) is installed in Piedmont's entire fleet of F-27's and Martin 404's.

Installation of the equipment is in compliance with a Federal Aviation Agency deadline to equip all commercial prop-jet aircraft with DME by January 1, 1964, and all commercial piston aircraft by July 1, 1964.

DME is an airborne, electronic navigational aid, designed to provide the pilot with a continuous reading in nautical miles of the aircraft's gradual departure from or approach to any selected beacon within range.

Basic Operation

Basically, it operates as follows:

The DME interrogates a ground beacon, receives its reply, and then measures the "slant-range" distance of the aircraft from a selected site. It does this by translating the time lapse between transmission and reply into direct, nautical miles. This mileage is then displayed on a cockpit indicator which tells the Captain at a glance how far the aircraft is from the selected ground beacon.

It will be an important added safety device on aircraft, since by combining DME information with that gained from his other navigational aids, the pilot will be able to determine his exact position more accurately and rapidly. Among other things, the information can be used as a check against estimated-time-of-arrival predictions, as a means of maintaining distance from

flights in front, and is a safety monitor, gauging distances from obstructions noted on the charts.

Tests Began

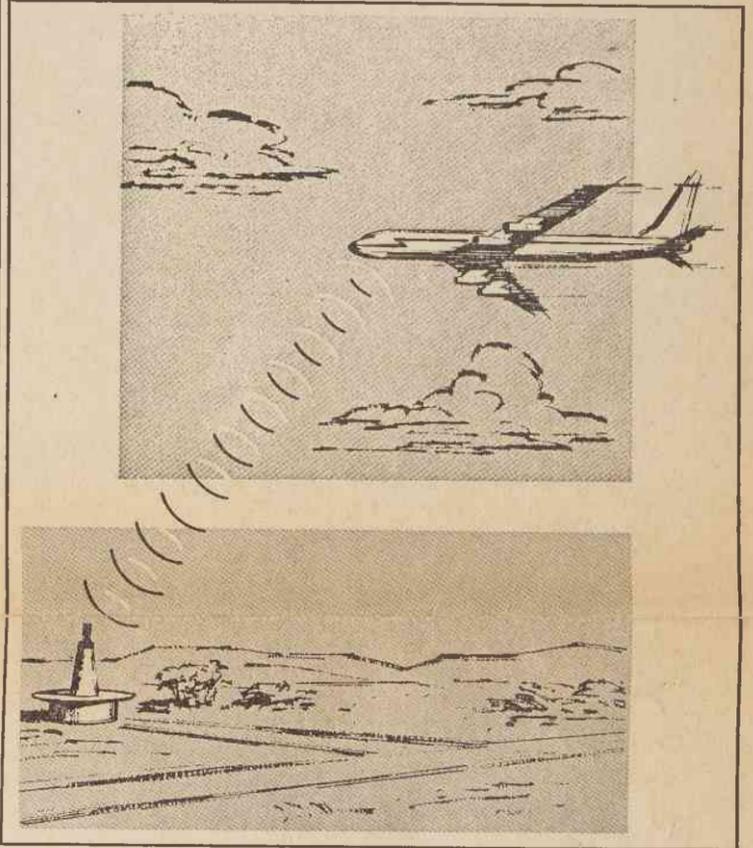
Last winter, Director of Communications L. A. Watson began testing different brands of DME equipment, and setting up a test bench in the Radio Shop to handle the electronic devices when they arrived.

Ground Beacons

The ground beacons used by DME are already in existence.

"There are over 500 ground stations in operation over the

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The illustration shows how an "interrogator" unit in an aircraft contacts a selected ground station. The response from the station is timed by the aircraft unit, and the time lapse between transmission and reply is translated into miles and shown on an instrument mounted in the cockpit.

Later, W. B. Haithcock attended DME training classes at the International Telephone and Telegraph Corporation, while A. L. Bianucci went to those at the Collins Radio Company.

In mid-October, International Telephone and Telegraph announced that Piedmont had placed a \$242,000 order with them for their new transistorized DME-100B and AIN-102A indi-

Watson Named ALCAC Chairman For Coming Year

Director of Communications L. A. Watson was named Chairman of the Air Lines Communications Administrative Council at a recent meeting of the group in Washington.

The Council acts in an advisory capacity on airline communications problems, and is divided into three principal committees—the Maintenance Committee, the Airline Electronic Engineering Committee, and the Frequency Committee.

The electronic engineering division is currently compiling specifications for the radio systems to be used in the nation's first supersonic transport.

The Council has representatives from all domestic trunk and local service airlines.

CARTOON IDEAS

Have you ever found yourself in a humorous situation and later thought it would make a great joke or cartoon?

Well, if you have, Jack Brandon, The Piedmonitor's star cartoonist (and INT Station Manager) would like to know about it.

Jack is searching for original cartoon ideas. He'd like all Piedmont people who might have some suggestions to send him a brief written description or rough drawing of their idea. He'll translate the idea into a cartoon for The Piedmonitor and of course give a full credit line to its originator.

The cartoon strip on page six of this issue is a product of a suggestion sent to Jack, though unfortunately its donor neglected to sign his or her name. If anyone knows the name of this anonymous creator, let either the Editor or Jack know and it will gladly be acknowledged.

Meanwhile, next time you run into a good cartoon idea, write it down and send it to Jack Brandon, INT-F. And — don't forget to include your name and station.