

WASHINGTON ARTC . . . AIRWAYS NERVE CENTER CONTROLS 110,000 SQUARE MILES

By R. H. Kitchen

The Washington Air Route Traffic Control Center combined with the Interstate Airways Communications, is located at the National Airport in Washington, D. C. There are 26 similar groups throughout the U. S., each performing the same function and each responsible for a given area for control purposes.

The area controlled by the Washington Center is one of the largest in the U. S. This area runs along an imaginary line from Millville, N. J. to Wilmington, Del., thence to Harrisburg, Pa., Martinsburg, W. Va., Elkins, W. Va., Roanoke, Va., Greensboro, N. C., Florence, S. C. Wilmington, N. C., and thence north on the Atlantic coastline to Millville, N. J. The area to the east of the coastline (seaward) is a little more difficult to define, but starting again at Millville, N. J., to a point 150 miles southeastward to the 73rd meridian to the 35th parallel, thence southward to a point approximately 125 miles southeast of Wilmington, N. C.

The area described encompasses an area of over 70,000 square miles inland and 40,000 square miles seaward. Duties of ATC Controllers are concerned with the movement of certain aircraft within this area from 700 feet above the ground upwards, and their objective is to promote the safe, orderly and expeditious movement of air traffic within the assigned area. This includes:

1. Preventing mid-air collisions between aircraft and between aircraft and obstructions on the route over which the aircraft will fly.
2. Expediting and maintaining an orderly flow of air traffic.
3. Assisting the person in command of an aircraft by providing such advice and information as may be useful for the safe and efficient conduct of a flight.
4. Providing Security Control of air traffic in conjunction with the U. S. Air Defense Command.
5. Broadcasting by radio certain flight information data at least twice an hour and more often when necessary.
6. Notifying appropriate organizations



ATC Radar Control. Controller "sees" the flight and talks directly with the pilot. (CAA Photo)

regarding aircraft known or believed to be in need of search and rescue aid, and assisting such organizations as required.

The Washington Center Station employs the use of long-range radar for the control of airplanes flying along the airways. A special rating is required by Controllers, acquired after considerable training, before they may use radar to control air traffic within a 70 mile radius of Washington, D. C. Radar aids include Approach Radar, Departure Radar, GCA (Ground Controlled Approach) and Surveillance Radar.

"Tools" used by ATC, other than radar are GFP (Government Full Period) and PL (Private Line) telephones which facilitate direct communications with all airport control towers, INSAC stations, Airline operations offices, and military installations within the Washington Control Area. Additional "tools" are the flight progress boards and radios.

The flight is first posted on a flight progress strip, which is a piece of cardboard eight inches long and one inch wide. Mounted in a metal holder, the information displayed gives the Controller a "four" dimensional "picture" of the traffic; that is, direction of flight, altitude, route and time involved.

After the first flight progress strip has been

made up, additional strips are made for each fix or reporting point (range stations, fan markers, radio range intersections, etc.) over which the flight will pass. These strips are posted at the various sectors of control with the estimated time the flight will pass over the fix. This enables the Controllers to coordinate and pre-plan some of their work because it shows the traffic "picture" in advance.

Having surveyed the traffic picture in the Washington Area and coordinating with fellow Controllers, the Controller then issues a clearance via GFP telephone. If the Controller must change the flight in some manner he must call a radio operator by the same type of phone and issue a clearance. If the pilot requests a change in his flight, this is relayed to ATC by the ground radio operator and the Controller acts upon it as the circumstances may require.

When the flight enters the ATC range of operations on the radar scope (70 miles) the Controller may then "see" the flight on radar and talk directly with the pilot by radio instead of going through a radio operator. The rapidity with which the Controller must make changes and issue clearances increases as the flight approaches the Washington Terminal.

Serious consequences can result from mis -