



TELERAN DEMONSTRATED

*Laboratory Advances in Television-Radar Air Navigation System,
Installed in Flight-Simulator, Revealed to Public*

IMPORTANT laboratory advances in Teleran, the system of television-radar air navigation and traffic control under development by the Radio Corporation of America, were revealed in Camden, N. J., April 10, at the first simulated flight demonstration of the system.

Introduced at the special showing in a laboratory of the Engineering Products Department of the RCA Victor Division was an equipment installation in a flight-simulator, capable of duplicating all the maneuvers of a plane in flight. This enabled the guests, seated in an enclosed cockpit, to observe on a Teleran screen their "progress" over a simulated aircraft course approaching the National Airport at Washington, D. C.

The demonstration followed private showings for officials of the Army Air Forces, representatives of the Navy, the Aircraft Owner and Pilots Association, the Air Transport Association, and the Civil Aeronautics Administration. These exhibitions constituted the second of three major steps planned in the development of the Teleran

system. The first was a public demonstration, without simulated flight, held at Indianapolis last October. The third will consist of actual flight tests, scheduled to start in Washington, D. C., next fall.

Four new technical advances were demonstrated at Camden. These were: a new "storage orthicon" television pick-up tube espe-

cially developed by RCA for Teleran; a Teleran picture tube employing high intensity phosphors for greater image brilliance; an optical map-mixing technique which improves the composite Teleran image and simplifies insertion of additional information when required, and a time multiplexing system which provides for simultaneous transmission of images representing different altitude layers and selective reception of the proper image by planes in any one of these layers.

Instead of using actual radar for the demonstration, RCA employed projectors to simulate the small "pips" or spots of light which indicate the relative positions and courses of aircraft in a selected altitude layer. Air routes, terrain markings, and similar information were superimposed by means of specially prepared slides, resulting in a composite picture which was transmitted to the pilot's cockpit.

Each person using the simulator was in full control of the movements of the pip of light representing his own "plane" in the composite image presented on the Teleran screen on the pilot's instrument panel. He was free to maneuver out of the paths of other moving aircraft pips and glide smoothly past stationary obstacles, according to his handling of the flight controls in the simulator.

The new orthicon tube "stores"

TELERAN SCOPE ON INSTRUMENT PANEL OF PLANE, SHOWING AIR
ROUTES AND TERRAIN INFORMATION SUPPLIED FROM GROUND STATION.

