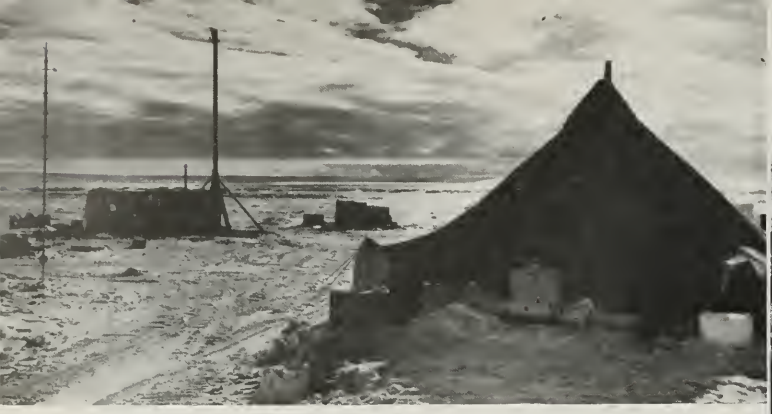


ONE OF THE ANTARCTIC CAMPS OF THE BYRD EXPEDITION FROM WHICH RCA PROGRAM SERVICE PICKED UP PROGRAMS FOR AMERICAN NETWORKS.

BELOW: REAR ADMIRAL BYRD'S VISIT TO HIS 1935 HEADQUARTERS WAS DESCRIBED BY SHORTWAVE TO RADIO LISTENERS IN THE UNITED STATES.

From Jungle to Antarctic

Wherever Broadcast Features Originate, Program Service of RCA Communications Reaches Out by Shortwaves and Delivers Signals to Networks

By S. H. Simpson, Jr.

Manager,
Program Transmission Service,
RCA Communications, Inc.

SINCE 1930, when the sound of London's Big Ben ushering in the New Year was first rebroadcast in this country, RCA Communications, Inc. has been serving the public through the use of its international shortwave facilities for the transmission and reception of program material.

During the war thousands of broadcasts were handled by our International Program Service, and, as a result, the listener at his radio was able to hear his favorite commentators as they roamed the world from Alaska to Australia, from Chungking to Algiers, and, in fact, from almost every place where the American GI was stationed.

Stated briefly, the problem of the Program Service is to supply technical facilities and coordinate arrangements between foreign points and the broadcasters in this country for such pickups. A casual visitor to the program control room in 66 Broad Street, New York City, during an early morning news roundup, might well be astounded. In the space of a few minutes, Paris, Athens, Cairo, Jerusalem and Buenos Aires, are brought in by the mere flip of a switch!

Supplies Unusual Facilities

But even this is routine compared to some of the unusual facilities which the Service is called upon to furnish from time to time. Whether it be from a presidential train enroute to Chicago, a lone ship deep in the Antarctic ice floes, a submarine off the coast of California, or an expedition observing a solar eclipse in a dense South American jungle, the worldwide facilities of RCA can be relied upon to help bring the story to the American fireside.

The story behind the broadcasts from the recent Byrd Antarctic Expedition illustrates the difficulties which must be overcome in picking up broadcasts from remote parts of the world. Carrying seventeen press and radio correspondents, the *USS Mt. Olympus* left Norfolk, Va., on December 2, bound for the south polar region with a rather inadequate 350-watt radio transmitter on board and a fervent hope that the plan to pick up a 2½-kilowatt transmitter, which was being flown to Panama, would not fail. Before the Canal was reached, initial tests had been conducted with the small transmitter, and despite its low power and the ship's limited antenna space, the RCA receiving station at Riverhead, L. I., was able to bring in a good signal. But all hands were relieved when the installation of the more powerful transmitter was completed a week after the *Mt. Olympus* sailed from Panama.

Handled Wide Frequency Range

To communicate with the *Mt. Olympus* from New York was in itself a problem. Not only was it necessary to handle the wide range of frequencies from 8 to 21 megacycles, but the vessel's bearing from New York changed consider-

ably, requiring the use of several antennas for adequate coverage. As a protective measure, Buenos Aires, Honolulu and San Francisco were alerted to relay programs from the ship if the direct circuit to New York proved unsatisfactory.

Most of the programs were short news spots covering everything from the first report of the tragic plane crash to what a penguin sounds like in Little America. A highlight of the series was an interview with Rear Admiral Richard E. Byrd aboard the aircraft carrier *USS Philippine Sea* while it was enroute to join the expedition already in the Antarctic.

A Paris-Antarctic Circuit

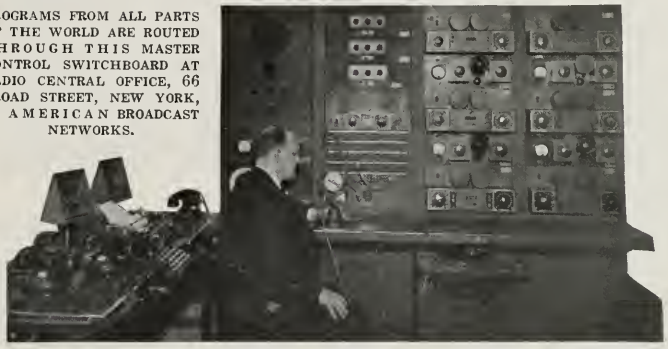
One of the most interesting international radio programs in connection with the Expedition took place on February 26, when Roger Goupillieres, American representative of Radio Diffusion Francaise, interviewed a member of the Byrd Expedition in Little America. The program was one of a series of broadcasts designed to bring to the people of France a view of American life. Frank Goring, Supervisor of RCA Communications' Program Operations, participated in the three-way conversation between New York, Paris and the Antarctic and explained in French how programs from the Byrd Expedition were being handled.

Despite the great distance to the south polar continent — farther from New York than Singapore— and the notoriously bad atmospheric conditions, American networks carried more than ninety broadcasts from Antarctica with remarkably few failures.

Unusual assignments are commonplace at Program Service headquarters. One day the American Broadcasting Company asked RCA Communications if it could pick up a program from the submarine *USS Segundo*. The network wanted to describe the action in a submarine during a crash dive. Preliminary tests carried on while the submarine was on the surface went well, but nobody knew exactly what would happen to the radio circuit after a crash dive. The worry was largely wasted, for the actual program came through a bit weak but satisfactory.

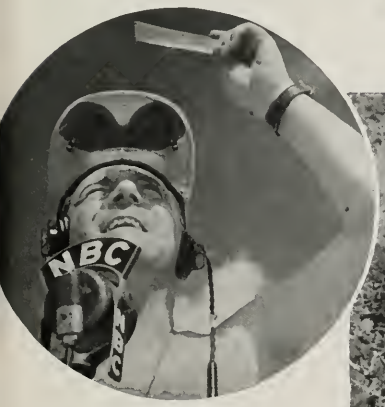
Through a Veil of Secrecy

Through a veil of secrecy which provided practically no information, the RCA Program Transmission Service was recently called upon to furnish program service from a B-29 flying with General Kenney's Strategic Air Command group in a mock air attack on New York City. The only available information stated that the plane would be flying in from Fort Worth,

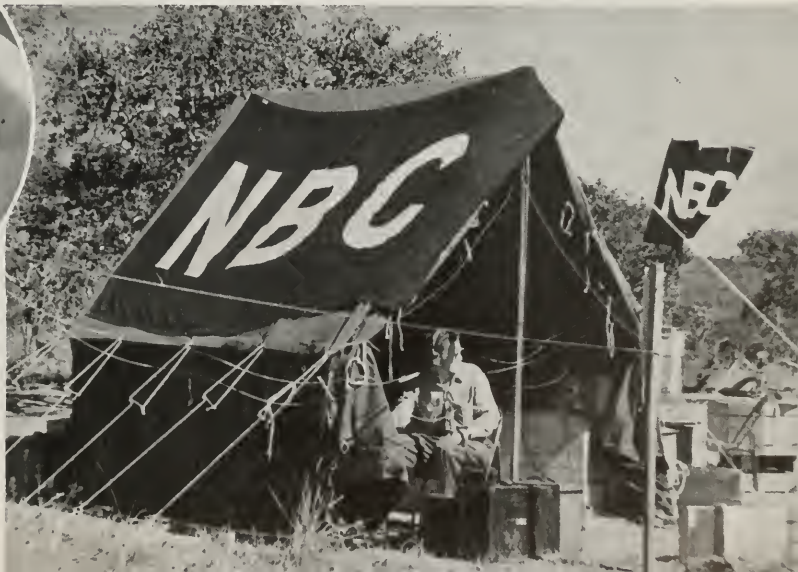


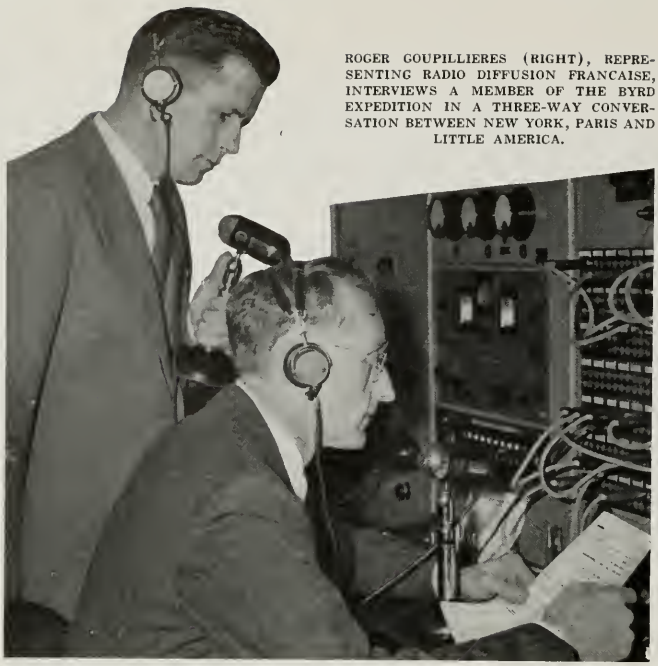
PROGRAMS FROM ALL PARTS OF THE WORLD ARE ROUTED THROUGH THIS MASTER CONTROL SWITCHBOARD AT RADIO CENTRAL OFFICE, 66 BROAD STREET, NEW YORK, TO AMERICAN BROADCAST NETWORKS.

SIGNALS ORIGINATING IN THIS CANVAS-COVERED TRANSMITTER AT BOCAYUVA WERE SENT SOUTHWARD TO RIO DE JANEIRO AND THEN RELAYED TO NBC OVER A PROGRAM SERVICE CIRCUIT TO NEW YORK.



BEN GRAUER DESCRIBES THE SOLAR ECLIPSE AT BOCAYUVA, BRAZIL, OVER A MICROPHONE LINKED TO NBC THROUGH AN RCA PROGRAM SERVICE CIRCUIT.





ROGER GOUPILLIERES (RIGHT), REPRESENTING RADIO DIFFUSION FRANCAISE, INTERVIEWS A MEMBER OF THE BYRD EXPEDITION IN A THREE-WAY CONVERSATION BETWEEN NEW YORK, PARIS AND LITTLE AMERICA.

Texas, and would operate on a certain frequency. Suitable frequencies for contacting the plane from the ground were selected and an urgent request given to the broadcaster to "get the information to the plane somehow!" At the scheduled test time the plane was heard calling RCA with a report that its shortwave receiver was in trouble. However, the operator said the program would be started at the stated time. The incoming signal was good and the stage was set. Program time arrived but nothing was heard from the plane. Anxious moments followed while the broadcaster filled-in from another location. Suddenly the missing signal came through from the plane and the broadcaster switched to that frequency just in time to hear the network's flying commentator say, "We now take you to an observer at the top of the RCA Building who will describe the scene from his vantage point!" It was learned later that a last-minute transmitter failure had ruined the show.

When the aircraft carrier *USS Leyte* visited Istanbul, Turkey, on May 6, NBC was anxious to pick up its representative, John Donovan. Tests indicated that the *Leyte's* signals arrived in New York too weak for rebroadcasting, but RCA Communications, through its connecting company in Greece, was able to set up a relay through Athens. This booster station enabled NBC listeners to hear Donovan's eyewitness description of the American flotilla's arrival and reception at the Turkish seaport.

Roundabout Circuit Best

The staff of RCA Program Service demonstrates frequently that while a straight line may be the shortest distance between two points, it is not always the best route for radio waves to travel. This was proved recently. To bring to American radio listeners an on-the-spot description of the solar eclipse on May 20, NBC dispatched a mobile transmitter to the jungle village of Bocayuva, Brazil, site of the observation camp erected by the National Geographic Society. It was planned to use the mobile unit to transmit the commentary of NBC's Ben Grauer, direct to New York. But because of the little station's limited power and the absence of adequate frequencies there was some doubt that the signals would carry through. Transportation problems ruled out the possibility of shipping bulky materials for a suitable antenna, and weight limitations barred a higher powered transmitter. Arrangements were therefore made with Companhia Radiotelegraphica Brasileira in Rio de Janeiro to pick up the signal from the Bocayuva camp—400 miles north of the Brazilian capital—and relay it to New York.

The maneuver was a success and Grauer's colorful description came through clearly to NBC's network listeners.

"Scientific Method" Can Solve Social Problems

(Continued from page 9)

responsibilities. It is this confusion, this feeling of dependency upon unknown factors that causes him to join pressure groups and power blocs for his own, rather than society's gain. Lack of cooperation is characteristic of modern society, and the people are dissatisfied."

Modern sociologists agree that these weaknesses of human behavior all trace to our failure to develop the social sciences, Dr. Jolliffe said.

The first thing to be done in the effort to correct this situation, he continued, is to make people aware of the power of logic and reason to solve the economic and political problems of our times.

"This is a task that must be assumed," he said, "by our more progressive leaders of thought — men and women of education, government, the professions, industry, labor and the arts.

"In my opinion, the art of thinking should be just as much a part of the educational system as reading, writing, and arithmetic.

"A thinking people will insist upon a logical approach to any kind of a problem, whether its character is physical or social. It will resort less frequently to falsely conceived panaceas, quack nostrums, and to expedience."