

PATROLLING THE AIRWAVES

BY PHIL GLANZER

SHIP and Clipper plane movements out of the port of New York were becoming known in Berlin and other interested Axis capitals almost as promptly as in Washington. For weeks the FBI tracked and watched until it was certain it knew the men responsible for the espionage. Proof of their means of flashing reports to Berlin was what was needed to make the evidence against them air-tight.

The proof was provided by another and newer corps of G-men: Uncle Sam's official policemen of the air. They detected coded dots and dashes emitted by an illicit transmitter, and with their instruments systematically mapped a path directly to the door of the Bronx apartment of Axel Wheeler-Hill, one of the FBI's suspects. The concealed short-wave transmitter was found and silenced. Passengers and cargoes of ships and Clipper planes departed with more safety.

This is only one example among many spectacular detective achievements of the Radio Intelligence Division (RID) of the Federal Communications Commission Monitoring Service that could be cited.

Twenty-four hours a day the 500 men of the Service cast their invisible nets into the skies of North America, catch whatever is going on, pick out the messages of spies and informers at home, and filter the broadcasts of enemy stations abroad for news that will be useful to our armed services and propaganda.

In peacetime the then small Monitoring Service had a comparatively simple job, that of checking on unlicensed "hams," or amateur wireless station operators, and seeing that the FCC's regulations were observed by licensed stations. In wartime the job has become vastly different and greatly expanded. The RID operates on a comparatively new frontier of crime. To develop counter-measures with which to cope with the many tricks of outlaws of the airwaves has been a challenge to the imagination, ingenuity, daring and scientific resources of Uncle Sam.

But the RID is staffed mostly by radio engineers and operators who have been building equipment and ranging the frequencies since they were in their teens and know the game from

PHIL GLANZER, a veteran of the Royal Canadian Air Force in this war, is now a free lance writer. He has contributed to many American and Canadian magazines.

beginning to end. Now as police they are pioneering effectively in a new direction. Like traffic officers, they enforce the ever-growing body of radio regulations, facilitate legitimate use of airwaves, and stand ready to assist any responsible individuals or organizations having radio traffic problems. Like detectives, they must constantly watch for and apprehend deliberate wrong-doers and devise safeguards against repetitions of the offenses.

The ordinary bluecoat who walks his beat trying the doors of business houses and keeping his eye peeled for evil-doers may patrol only a few city blocks. The radio-equipped squad car covers only a section of a city. But the men of the RID must patrol a beat along the radio spectrum that is 300 times the portion of the spectrum covered by the dial on your standard broadcast receiver.

They cruise these wide open spaces of the ether twenty-four hours around the clock, seven days a week, year in and year out, with twelve primary monitoring stations and fifty-nine secondary of satellite stations strategically located throughout the United States, territories and possessions. The satellite stations are smaller and not so elaborately equipped as the super-powered primary stations. They are tied into their respective primary stations by special communication services. The RID also has fifty mobile monitoring stations, which are high-powered direction-finding setups concealed in ordinary-appearing sedans that can be dispatched to any area

from which suspicious radio signals emanate.

All the primary stations east of the Mississippi are linked by teletypewriter with each other and with their nerve center, the Eastern Intelligence Center in Washington. The Western stations are tied into the Western Intelligence Center at San Leandro, California. There is also a Hawaiian Intelligence Center. The two Intelligence Centers in this country are linked by teletypewriter so that in effect there is a nation-wide network capable of operating on a national, regional, or local basis.

II

A case that developed two days after Pearl Harbor illustrates how this far-flung policing organization operates. The normal means of international communications, such as the telephone, radio telegraph and cable, were closed or under rigid control, so that the only means by which any spy in the United States could communicate quickly with an Axis station out of the country was by clandestine radio. On December 9, 1941, an operator at the FCC primary station at Portland, Oregon, tuned in a short-wave station sending the call letters UA and operating on a frequency capable of reaching across the Atlantic. Since he was unfamiliar with these call letters, he at once referred to an identification list and determined that the transmitter was unauthorized.

Here was a case that demanded in-

stant investigation by the entire RID network. The Portland station immediately flashed its discovery over the teletype network. In a matter of seconds, RID primary stations at Millis, Massachusetts; Grand Island, Nebraska; Laurel, Maryland; Kingsville, Texas; and Marietta, Georgia, were like so many bloodhounds sniffing the air for the scent.

At each primary station and many secondary stations — at some distance from the main building — is a tower. In this tower there is always an operator whose job is often lonesome and tedious, but is sometimes thrilling. His function is to revolve a large antenna called an Adcock direction-finder and use it to take bearings on suspicious signals. The instrument, perfected by RID engineers, is the most accurate long-range radio direction-finder that science can contrive.

As the alarm came in, the Adcock direction-finders of each station swung into action and immediately teletyped to the Eastern Intelligence Center the direction from which it was receiving the strongest signal. Experts at the Eastern Center plotted the projection of these bearings on a map. The point of intersection of the lines, of course, indicated the area that was the source of the signal. This is called the "fix."

Within six minutes from the time the Portland, Oregon, station, 3000 miles away, first tuned it in, the location of the short-wave transmitter UA was definitely narrowed down to the vicinity of Washington, D. C.

Due to precautionary measures undertaken before Pearl Harbor, the RID already had mobile units cruising the area. These automobiles have their detection equipment concealed so that they will arouse no suspicion as they cruise about the streets or country roads. One of their pieces of equipment is a special receiver which will reproduce a signal on any frequency and without an operator having to turn the dials to a specific frequency. It will sound off when a transmitter is operated within one or two blocks of its location. This is called the "watch dog."

Using the two-way radio-telephone with which each car is equipped, and talking in code, RID cars cruising in three different parts of Washington took bearings, compared them, and gradually narrowed the area of the search until their "watch dogs" told them the clandestine station was in the block bordered by 14th Street, Massachusetts Avenue, 15th Street and N Street. Cruising around that block and noting variations in the intensity of the signal, they determined that the transmitter was in the German Embassy. The detective work had been done so quickly that RID located the transmitter while the operator was still sending his call-letters, that is, before he had succeeded in contacting his receiving station in Germany.

RID immediately reported this discovery to the FBI and to the State Department. In accordance with plans worked out at 4 A.M. with the FBI, the RID operatives took steps to

determine the exact room of the building in which the transmitter was located. They obtained the co-operation of the local electric power company and, under cover of night, RID men crawled down a manhole in front of the Embassy to install switches which would permit them to isolate the power circuits and so determine whether the transmitter was in the Embassy residential quarters or in the Chancellery.

When the question had been answered, the State Department decided not to violate diplomatic extra-territorial conventions and force an entrance to the building, because American diplomatic officials had not been returned from Germany and the State Department feared reprisals against our own Berlin Embassy. So, instead of seizing the transmitter, RID took two counter-actions. First, it established two jamming stations, one in Massachusetts, and the other in Maryland, to smear any transmissions from the Embassy. These jammers were beamed on Berlin. Second, a monitoring service station was installed in an apartment nearby to intercept any messages the Embassy tried to send.

The RID obtained evidence that the man who operated this transmitter was the chief operator on the *S.S. Columbus*, which was scuttled by its crew off the Atlantic seaboard to elude capture by the British. Through some arrangement, he was transferred from the internment camp in this country to the Embassy, where he constructed the transmitter.

This demonstration of the alertness of the RID had a significant result. It apparently convinced Axis agents that radio activity in this country had small chance of success, for thereafter they concentrated most of their efforts elsewhere.

Since July 1, 1940, the RID has located nearly 380 unlicensed transmitters in the United States, territories and possessions, but the great majority of the cases did not involve espionage activity. Nearly all the enemy espionage transmitters located by the RID since Pearl Harbor have been located outside American jurisdiction — in Latin America, in Africa and elsewhere within the territory of the United Nations.

When Axis agents shifted their operations to South America, RID followed them and the story of its subsequent sleuthing there constitutes one of the most thrilling chapters in the defense of this hemisphere.

III

Not all RID's detective triumphs are concerned with crime. It often provides life-saving direction-finding service to lost airmen.

Last year, when Kay Francis, Carole Landis, Mitzi Mayfair and Martha Raye, the famous "Four Jills and a Jeep," were returning from their trip to Africa to entertain the troops, Kay Francis was one of twenty-three passengers assigned to a Pan-American Airways Clipper. Her plane became lost *en route* to Miami, *via* Trinidad.

When the plane was an hour-and-a-half overdue at Miami, the Civil Aeronautics Authority office there flashed word to the RID that the pilot had reported he had lost his bearings and was running low on gasoline. The pilot didn't know whether he was heading east into the Atlantic, south through the Caribbean or in some other direction.

The RID followed the same procedure it uses in locating any other signal — whether a code message from a clandestine radio station or interference from a doctor's diathermy machine. The RID monitoring station at Miami promptly signaled the primary station at Powder Springs, Georgia, which in turn alerted the entire Eastern direction-finding net and, virtually instantaneously, all the primary stations east of the Mississippi were tuning in the plane's signals. Within a few minutes, the various bearings they reported were correlated by the Eastern Intelligence Center in Washington and the "fix" was sent to the CAA, which in turn relayed it to the lost plane. A second "fix" followed and twelve minutes later, the plane landed safely at Alma, Georgia.

The chief flight watch officer at Pan-American's Dinner Key station stated that "if it had not been for the 'fixes' supplied by the FCC, the plane

undoubtedly would have remained lost and crashed."

What Miss Francis's emotions were through all this were evidenced in a radio program a night or so later when she requested a song familiar to all airmen — *Coming in on a Wing and a Prayer*.

There is yet another kind of detective work that the RID does. Careful translation and analysis of the recordings that one or more FCC Monitor Service listening-posts make of all enemy radio programs, has enabled RID to co-operate with the Army and Navy in extracting information of immediate military value, and also to reduce Japanese and German broadcast propaganda to statistical graphs from which the rise and fall of their war efforts have been plotted like the fluctuations of the stock market. They have enabled strategic shifts in Axis policies to be anticipated. When Germany was on the offensive, it could usually be determined from Nazi broadcasts of the "crimes" of the chosen victims, where the next blow would fall.

The Monitoring Service keeps check not only on the propaganda aimed at the United States, but also on that directed by any nation at the rest of the world. It is keeping Uncle Sam's ears wide open to portents of the future.



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The American Character

BY CHARLES ANGOFF

ON a cool September afternoon in 1920 I asked a fellow student at Harvard why, since he liked history, he didn't "concentrate" on American history, instead of European. Quickly he replied, "American history just isn't interesting. It's local. Not on a world scale."

The young man was only reflecting the opinion of most college students and a very large section of the public. The non-academic literary world, despite its protestations of maturity, felt likewise. The writers of the *New Republic*, the *Nation* and the *Dial* more often sneered at things American than praised them. Even Van Wyck Brooks, who now bursts with glad tidings of the great and indescribable wonders in our past and present, back in 1915-1930 specialized in throwing contemptuous aphorisms at our history.

Fortunately, while so many of our intellectual leaders have been blind to the importance and grandeur of our past, foreign observers have continued to be engrossed by it and to write about it with increasing power and understanding.

More than a hundred years ago an

eminent Frenchman wrote a superb tribute to our democracy, at a time when American educators and journalists were still not sure that democracy was going to work. A few years later another Frenchman hailed Edgar Allan Poe as a glory to the literary art, while the self-same Poe was little more than a name to most of our cultural leaders. Similarly, it was an Englishman who, in *The American Commonwealth*, wrote the best description of our way of life, and another Englishman who, in *Studies in Classic American Literature*, wrote what is perhaps the most profound analysis of our imaginative writings ever put on paper.

Now, still another Englishman, Dr. D. W. Brogan,¹ professor of political science at Cambridge University, writes one of the most warm-hearted and penetrating studies of our mode of living ever to appear in print. One hopes for it a long life and a wide public, not only in this country but in all other English speaking countries — and, in translation, in non-English speaking countries — for it is a

¹ *The American Character*, by D. W. Brogan. \$2.50. Knopf.