

RADAR SECRETS ARE UNCOVERED TO PUBLIC EYE

Radio Detection Device Played Key Part in Victory Over Axis Countries

By Reuel S. Moore
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Washington, Aug. 16—(U.P.)—The armed services today uncovered some of the secrets of radar, the all-seeing electronic eye that history may record as the Allied margin of victory over both Germany and Japan.

Radar, which means "radio detecting and ranging," is older and less spectacular than the atomic bomb. But it gave the Allies victories in the dark hours when more defeats for our side might have meant obliteration.

It turned the tide of the battle of Britain, fending off the Nazi blitz.

It won the battle of the Atlantic against the German submarines.

It made possible the constant precision blasting of German industries.

It enabled U. S. ships and planes to hit the Japanese navy in fog and darkness.

Aids Navigation

In peace, radar will aid air and sea navigation, enable planes to land much more safely in bad weather and at night.

American scientists expect that its impact on the electronics industry will be "profound and far-reaching."

Radar is an electronic device that sends out lightning-fast impulses and then records the electric reflections that are sent back when the impulses strike in their path. These reflections are translated onto a screen that provides a rough "picture" of the surrounding land, sea or air.

Ships, airplanes, and prominent features of the landscape stand out in this picture.

The radio impulses send back their tell-tale information through fog or darkness. They probe many miles beyond the range of man's vision or the effectiveness of aids to sight or sound.

With radar, U. S. and British fighting men were able to track down, locate and destroy enemy targets they could not even see.

Radar Spots Bombers

With it, the RAF was able to watch the German bombers leave their airfields in France. The RAF then could send fighters to intercept them at sea.

With it, the U. S. cruiser Boise was able to sink three Jap cruisers and three destroyers in 27 minutes.

With it, the cruiser San Francisco was able to sail into a Jap task force with blazing guns and see every enemy ship go down amid the wild confusion.

On the Anzio beachhead, American troops were taking a terrific pounding from enemy night bombers. A new fire control radar was brought in, and the next morning the ground was strewn with Nazi planes. Soon the night attacks stopped.

because the Germans were losing too many aircraft to make it worth while.

Like the atomic bomb, radar was the goal of a frenzied scientific race against the enemy. Both Germany and Japan used radar, but theirs was inferior to ours throughout the war.

"The failure of the Nazis and the Japs to keep pace with Allied radar has been probably the major single reason for the defeat of one and the imminent defeat of the other," said an army spokesman.

In Post-War World

Radar will bring into the post-war world a ready-made billion-dollar segment of the electronics industry. The effects of research in these vast laboratories toward peacetime uses of radar ultimately will be great. For the present, radar itself will have what a joint armed services scientific board describes as "a mild, beneficial effect" on everyday life. It will make air and sea navigation much simpler in peace as it has in war.

But, the board added, "The impact of electronics generally of techniques developed during the war because of radar will have profound and far-reaching effects on the shape of our daily life."

In 1933 congress appropriated \$100,000 for research in radar—the first funds specifically earmarked for this purpose. In October, 1939, the first contract was awarded to a commercial firm for the manufacture of radar equipment.

How radar works:

A great battleship moves through open waters at night leading a task force. In the radar room, the screen picks up an enemy ship at extreme gun range, outlining it in light patches on the screen. Radar plots range and direction. The signal to fire is given. An observer watches the shells move across the screen, sees the salvo land squarely on the picture of the enemy ship, which fades slowly away. The vessel has been discovered, identified, fired on and sank without being seen visually.

Bursts of Energy

Here is how this is possible:

The radar transmitter sends out bursts of energy, or impulses, perhaps a millionth of a second apart. The receiver picks up the electronic "echoes," those produced whenever the impulses strike. The nearer the object the sooner the echo returns, thus measuring its distance.

Direction is determined by a rotating antenna which sends out the pulses in a narrow beam, like a searchlight.

The reflected impulses are recorded on the screen similar to the one used for television. A narrow luminous line representing the antenna beam rotates over the screen in a full circle every few seconds. With each rotation it leaves a map-like reproduction of the surrounding area in patches of light and darkness on the screen.

For protection, there is another device that the services call IFF—identification of friend or foe. Used on ships and planes, it emits a special sort of signal that makes a distinctive mark on the screens of all radar installations in the area. Thus when a ship, for instance, is picked up on a radar screen, it can be told at once whether the ship is friendly or not.

U. S. Nat'l Bank

Now Rated 29th

According to Geo. T. Frey, manager of the Medford branch of the United States National bank, this Oregon banking institution has now attained 29th position among the nation's top-ranking banks.

The United States National Bank's deposits as of June 30, 1945, totalled \$509,589,564 as against \$428,139,115 for June 30, 1944. During this same period the bank jumped from 35th position to 29th position nationally.

"We are proud," said Mr. Frey, "of this splendid record."

RECONVERSION TO AID EMPLOYMENT WILL BE HURRIED

War Production Board Aims At Jobs For All In Country Within 12 to 18 Months

Washington, Aug. 16—(U.P.)—The war production board today put into effect its "sky's the limit" reconversion plan. The aim: to provide full employment within the next 12 to 18 months and a standard of living 50 per cent higher than the American people have ever known.

War-time shackles on industry were being ripped off in wholesale lots.

WPB Chief J. A. Krug promised that by next week-end all but 30 or 40 of WPB's 400 orders controlling industry will be lifted. Only those are being retained that will assure orderly and fair distribution of critically tight materials such as tin, rubber, textiles, and lumber. And these are coming off as soon as possible.

First Conference

President Truman holds his first postwar press conference this morning and may amplify his views on his requested legislation to ease economic dislocation and unemployment during the reconversion period.

Thousands of munitions workers—men and women who only a few days ago were soldiers of the production line—already have joined the army of unemployed, which is expected to swell from its present total of 1,100,000 to 8,000,000 by next spring. They were among the first to feel the impact of the government's "cease production" orders which were rushed out to American industry following Japan's surrender.

There will be many thousands more out of jobs in the coming weeks. By Thanksgiving some 5,000,000 are expected to be unemployed.

Many Plants Closing

From all points of the country came word of plant closings and accompanying unemployment as the result of mass war contract cancellations. At Kansas City, the North American Aircraft plant was ordered to stop making B-25 Billy Mitchell bombers, and officials said 3,000 workers would be laid off Monday and another 2,000 on Tuesday.

The Bell Aircraft plant at Marietta, Ga., producers of B-29 Superfortresses, also reported getting notices of contract termination. So did the big Bell and Whitney engine plant at Kansas City.

These were typical of the hundreds of war plants affected by cutback orders which will reach approximately \$35,000,000,000 within weeks.

The estimate of 8,000,000 unemployed by spring came from Reconversion Chief John W. Snyder. But neither he nor Krug was pessimistic about the outlook. Both expressed confidence that American industry will absorb them as soon as it hits its full stride.

Higher Living Aim

Pointing out that the war put a new and higher ceiling on American ideas of production, Snyder said that the government's reconversion program is "shooting at a standard of living for our people as a whole that will be 50 per cent higher than we or any other people have ever had."

Said Krug: "Practically all

materials and resources needed by industry will be available in abundance. As a matter of fact, materials will be running out of our ears. The important thing is that we must get industry running fast enough to use them."

Krug emphasized that the actual job of reconversion will be handled by private industry with pretty much a hands-off policy by the government. The government's part, he said, will be to remove wartime production blockades, smash bottlenecks, prevent hoarding, and to hold down inflation.

"If we're going to do a lot of wand-waving in Washington, a lot of people are going to wonder if we know the war is over," he said.

Ceilings To Be Lifted

One of the first things WPB is doing—and right now—is to lift ceiling on production of automobiles and other consumer durable goods so that these important industries may move ahead with all-out programs. Krug wouldn't say how many cars could be expected by the end of the year, but ventured the opinion that the industry should have the capacity and the materials to produce at least 500,000 by the year end.

What's more, Krug said, civilians have good prospects for getting a lot of the household standbys they haven't been able to get for almost four years. For instance, he said, mechanical refrigerator production should total 125,000 in the third quarter of this year and 700,000 in the fourth; washing machines, 56,000 in the third, and 500,000 in the fourth; sewing machines, 10,000 in the third, and 75,000 to 100,000 in the fourth; electric ranges, 35,000 in the third, and 75,000 to 100,000 in the fourth; and 2,500,000 new radios by Christmas.

High Points Listed

Other high points of WPB's master reconversion plan listed by Krug were:

Relaxation of construction controls to release a huge industrial building program. Additional modifications will be considered within 30 days.

Retention of inventory controls until the danger of hoarding, preemptive buying and stockpiling by the few at the expense of the many are over.

Preferential protection of small business (\$50,000 or less per quarter) to remain in effect for the time being until the cutbacks can be appraised and it is safe to remove them.

WPB will retain its powers for breaking bottlenecks or giving protection where needed to military or highly essential civilian or export needs. These powers will be used only where necessary, and "business should not rely on priorities help" for conducting its normal activities.

Closing time for Classified Ads 8:30 a. m.—Too Late to Classify 12:15 p. m.

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