

Tests at Sea Prove Value of Radar As "Eyes" of Battlegions During Attack or Navigating Through Fog

(Editor's Note: Radar—the radio "eyes" which enable our army and navy to spot enemy ships and planes in fog or darkness at great distances—underwent a thorough test at sea early in 1939. Scientist Robert M. Page, who mainly developed the modern equipment, and a crew of assistants went along to operate the pioneer set. John M. Hightower takes up the story at that point in this fifth of six daily installments.)

By JOHN M. HIGHTOWER
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WASHINGTON, June 25 (AP)—The tests begun aboard the battleship New York in 1938 were crucial in the history of U. S. naval radar.

The reaction of practical, hard-headed line officers to the way the equipment performed appeared likely to determine its fate for some years to come.

If results were poor, the scientists knew, then the navy's fighting men probably would not be interested in radar for a long time to come. To win acceptance, it had to be good.

Page headed the operating crew which went out on the New York, taking with him Robert C. Guthrie, M. E. Repper and A. A. Varela. They hardly had cleared the Virginia capes out of Norfolk, when the fun started.

Tough Test

A destroyer squadron had been assigned to make a torpedo attack on the battleship under cover of darkness and Page recalls now that the night was very black indeed. From about sunset on, he and his men stood by their radar waiting to pick up the destroyers. They did not know from what direction the attack was coming. They to keep a 360 degree lookout.

Several hours after they went on the alert, the Atlantic squadron commander, Vice Admiral Alfred W. Johnson, showed up in the control room. He watched and watched the radar indicator. For a time which to Page seemed endless, nothing happened. Finally the admiral lost patience. He knew the time of attack and he evidently decided the destroyers were closing in through the darkness without being discovered. He turned to go, then decided to wait a few minutes longer.

First Signal

Just about that time the first signal came in.

"There it is," exclaimed the admiral, pointing to the indicator. The destroyers still were eight miles away. The effect on the admiral was electric. From that moment on he was a radar enthusiast.

Captain (now Rear Admiral) Robert M. Griffin, skipper of the battlegion, was similarly impressed.

"After that," Page says, "anything we wanted them to do on the New York, they would do it if it was possible." The ship never encountered fog but it often ran through rain. Radar picked up everything important which was within range, including on one occasion the mountain peaks of a distant shoreline.

Report Favorable

When the cruise ended, Admiral Johnson made a report: "The equipment is one of the most important radio developments since the advent of radio itself."

Back in the navy's bureau of engineering the scientists, Rear Admiral Harold G. Bowen and other navy authorities decided the time had come to develop additional radar sets, but with the understanding that the branching out into quantity would not in any way interfere with further progress in the improvement of quality.

Two of the major electronics laboratories of the country—those operated by Bell Telephone and Radio Corporation of America—had by then been interested in radio detection work, and this meant the way was clear for commercial manufacture.

Contracts Let

On a bid basis, the first contracts were let to RCA in October, 1939—a month after the outbreak of the war in Europe. "We sent the XAF up to their place," Dr. Taylor says, "and we told them that we wanted six Chinese copies—not a thing changed. They did a fine job."

From that time on, the bureau of engineering under Admiral Robinson, who was aided by Captain A. J. Spriggs and such enthusiasts as Commander Sam Tucker, devoted considerable effort toward increasing production.

The bureau of ships, formed in 1940 by consolidation of bureau of engineering and bureau of construction and repair, and headed by Admirals S. M. Robinson and A. H. Van Keuren, continued this work, as did Captain J. B. Dow when he succeeded Spriggs in charge of the bureau's radio unit.

Later the radar business of the navy as well as that of the

REEDER TO ATTEND FORESTRY MEETING

County Judge U. E. Reeder will leave Monday night for Salem to attend his first meeting as a member of the Oregon state board of forestry to which he was appointed last week by Governor Earl Snell.

This is the annual meeting of the board and at this time members will consider fire patrol assessments for the next fiscal year. Other matters to come up will have to do with the policy pertaining to acquisition and slash disposal. Judge Reeder will return Wednesday morning.

"Mr. Guthrie did an especially splendid job in getting these early installations in the fleet and seeing that somebody knew how to operate them," Taylor said one day in Guthrie's presence.

Guthrie looked thoughtful for a moment, then grinned.

Cloud Trouble

"I had trouble on one occasion," he said. "We had put radar on a cruiser, and the executive officer didn't think much of it. About the first day out he came to the control room to see what it could do. We picked up a flight of planes all right and then we got something else. He went outside to look off in the direction from which the signal came and there wasn't anything but a cloud.

"You must have picked up the cloud," the exec said.

"No," I said, "this thing looks right through clouds."

"So he waited and waited for something to come out of the cloud but nothing did. Then he asked me to try to pick up several other clouds on the horizon.

I tried, but got no signals, and I couldn't explain then what had happened. I'm afraid he had little faith in radar for a while after that.

"Now, of course, we know that the cloud was ionized (surged with electricity). We were getting reflections like those from the ionosphere in the old days."

Western Pine Up During Last Week

PORTLAND, Ore., June 25 (AP)—Production and shipments showed gains during the week ending June 19 over the previous week, the Western Pine association reported today.

Orders: 83,995,000 board feet; 85,267,000 previous week, 100,992,000 same week last year. Shipments: 80,141,000 board feet, 77,875,000 and 103,145,000. Production 92,703,000 board feet, 88,013,000 and 102,163,000.

According to census figures, about 22 per cent of all deaths in the United States are due to communicable diseases.

Increase in Pig Crop Expected

WASHINGTON, June 25 (AP)—The agriculture department estimated today the 1943 spring pig crop totaled 74,059,000 head, or 15 per cent more than the record crop of 1931 and 22 per cent more than last year.

The department said also that reports from farmers on farrowing plans indicated a 1943 fall pig crop of about 53,000,000 head, or an increase of about 9,000,000 or 21 per cent over the 1942 fall crop.



Example of Cost of Motor Overhaul of Popular 6-Cyl. Car

Item	Labor	Parts
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Expand Pistons	3.80	
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Gaskets		2.55
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PARADISE LOST
WASHINGTON, Conn. (AP)—Meat has been pretty scarce for the dogs here lately. So when a little white pooch spied what he thought was a big, juicy bone, he hurried off to hide it before one of those big dogs came along. He buried the turtle seven times before he gave up.

IT NEVER FAILS
CHARLESTON, S. C. (AP)—Chief Accountant J. M. Ellwood of the navy yard burned midnight oil setting up new income tax deduction tables. He even figured the deductions of workers with ten dependents. Then in walked a man who proudly announced he had 12 dependent children, all under 18.



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5. "Pay" with 8 and 5 point stamps first when you can. Save 2 and 1 point stamps to make the count come out even.
6. Include fresh fruits and vegetables, cereals, fresh fish, poultry, and other unrationed foods where you can.
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8. Don't blame your grocer or butcher for wartime inconveniences.

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