

# “It was the largest blip I'd ever seen”: Fort Monmouth Radar System Warned of Pearl Harbor Attack

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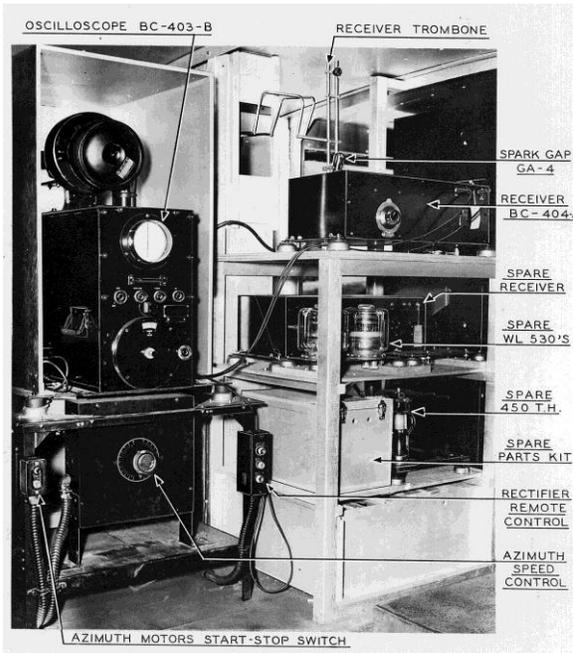
Debates still rage over what might have happened at Pearl Harbor if early warnings of the attack had been received and acted upon. One thing is apparent when looking back at the accounts: the Fort Monmouth-developed radar sets performed flawlessly. Their success in detecting the Japanese attack is a tremendous milestone in the history of the Signal Corps Laboratory and Fort Monmouth.

Fort Monmouth's experiments with radar began in the 1920s under the direction of Col. William R. Blair, director of the Signal Corps Laboratories. In May 1937, Fort Monmouth engineers demonstrated a pulse-type radar unit to senior congressional and military officials. They planned to show how the radar would detect a B-10 bomber at night; however, the test ran into technical difficulties. The B-10 the engineers were

supposed to detect was blown off its pre-planned flight course, forcing the engineers to search for its new location. This turned the event from a controlled demonstration of how the radar set would detect a plane to the actual detection of an aircraft in the night sky.

Developmental work continued after this successful test. By the 1940s, engineers developed a series of radar units that included the SCR-270 radar set: the Pearl Harbor radar.

The SCR-270 radar set became fully functional in July 1941. By November, four SCR-270 radar sets were deployed to Oahu, Hawaii. Though the radar sets were in place, no real communications system or reporting chain had been established to handle any information that they might detect.



16. Parts of an early SCR-270 installed in a K-30 truck.

Source: H. W. Andrews from Zahl papers

Instruments and instrument panels for the SCR-270 Radar Unit

In the early afternoon of Dec. 6, 1941, the Signal Intelligence Service intercepted 13 parts of a 14-part message from Tokyo to the Japanese diplomats in Washington D.C. The

message was a counterproposal that the Japanese diplomats were to present to the Secretary of State at 1 p.m. the following day.

The intercepted message was received at a Navy station and sent by teletype to Washington. The 14th part of the message was finally intercepted at about midnight and sent by teletype to Washington D.C. This final message announced that the Japanese government would sever diplomatic relations with the U.S. effective at 1 p.m., a warning of the potential for an attack.

On Dec. 7, 1941, three SCR-270 radar sets in operation on the northern shore of Oahu recorded impulses between 4 a.m. and 7 a.m., indicating the approach of what would turn out to be two Japanese reconnaissance planes.

“It was the largest blip I’d ever seen,” said Pvt. Joseph Lockard, one of two Signal Corps radar operators on duty that morning at the Opana Radar Site in Hawaii.

One of the radar stations reported the findings to a Navy lieutenant on duty at the Information Center at Fort Shafter, Hawaii. The lieutenant reported it to another Navy lieutenant, who determined that the Navy “had a reconnaissance flight out, and that’s what this flight was.”

At 7:02 a.m., the radar detected an aircraft approaching Oahu at a distance of about 130 miles. The Signal Corps radar operators telephoned the Information Center at Fort Shafter and reported a “large number of planes coming in from the north, three points east.” The operator at Fort Shafter informed his superior that the radar operator said he had never seen anything like it, and it was an “an awful big flight.”

The Japanese raid on Pearl Harbor began 55 minutes later.

Following the attack, the Congressional Joint Committee on the Investigation of the Pearl Harbor Attack concluded that the air warning system was ineffective because there was no provision to keep track of planes in the air near and over Oahu, or for distinguishing between friendly and hostile aircrafts.

Because of this deficiency, the committee concluded that “a flight of planes which appeared on the radar screen shortly after 7 a.m. was confused with a flight of Army B-17s en route from California, and that the information obtained by Army radar was valueless as a warning because the planes could not be identified as hostile until the Japanese markings on their wings came into view.”

However, Fort Monmouth’s SCR-270 radar set proved its capability by detecting the Japanese bombers on that fateful Sunday morning.