Mystery of the Opana Radar Site

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Topics

- Discuss what happened at the Opana Radar Site on the morning of December 7, 1941.
- Demonstrate Opana radar site as a technological and strategic success.
- Clarify the issue of responsibility.
First radar experiments in the 1920s and the 1930s.

Radar measured the time for radio waves to travel to an object, be deflected and return.

Developed into a system that had the ability to detect long-range objects.

Radar could detect enemy planes and ships long before they could be detected by other means.
Britain installed a series of radar stations on the southern coast of England.

Radar played a critical role in the Battle of Britain.

Enabled the British to determine the direction, altitude, and speed on oncoming German aircraft.

Radar allowed air command to concentrate their limited fighter forces against the Luftwaffe.
Radar and U.S. Military

- Naval Research Laboratory carried out experiments from 1934 – 1936.
- The United States Army Signal Corps also started developing radar as early as 1930.
- In 1937 the test radar unit was demonstrated.
- Based on this test unit, in 1940, the SCR-270 became available for coastal defense.
- First deployed in Panama in the Fall of 1940 - early warning for the Army Air Corps, Pursuit Squadron.
Opana Radar installed Thanksgiving Day 1941

- Mobile radar detector sets were installed in 6 sites on the island of Oahu by the Fall of 1941.
- The Opana Radar Site
  - 532 feet above sea level
  - unobstructed view of the Pacific Ocean
The SCR-270 was one of the first operational early warning radars.

Consisted of four trucks carrying:

- transmitter,
- modulator,
- water cooler,
- receiver, oscilloscope,
- operator,
- generator and antenna.

Eventually radar was deployed around the world.
How radar was supposed to work

Aircraft warning communications net:
6 radar sites

Aircraft Information Center at Fort Shafter

Army Pursuit Squadrons
The Army Air Corps was changing its pursuit squadrons into interceptor squadrons for a planned Interceptor Command.

The Army Anti-Aircraft Artillery batteries were undergoing modernization to employ their new SCR-268 radar.

The radar sets on Oahu were one component of the intended integrated air defense system.

The integration of the commands was not complete by 7 Dec 1941.
The radar unit at Opana Point manned by Pvt. George Elliot and Pvt. Joseph Lockard

- That morning the set was supposed to be shut down
- Elliott decided to get in additional training time
At 7:02 they detected the Japanese aircraft approaching Oahu at a distance of 130 miles.

Lockard telephoned the information center at Fort Shafter: “Large number of planes coming in from the north, three points east".
December 7, 1941 at Fort Schafter

- Lt. Kermit Tyler, a pilot with the 78th Pursuit Squadron, stationed at Wheeler Field, HI,
- This was only the 2nd time Lt. Tyler had duty at the Information Center.
- After receiving Lockard’s report, Tyler reasoned that the radar blip was a flight of Army B-17 bombers due in that morning.

“Don’t worry about it.”
Elliot and Lockard continued to plot the incoming Japanese planes until 7:40 a.m.

Contact was lost in the background interference as the planes approached Oahu.

Both men then secured the Opana radar shortly before 8 a.m. and headed down to Kawailoa for breakfast.
Tyler and the Chain of Command

America was at peace.

Tyler had no reason to expect an attack.

There was no alert.

- Kermit Tyler was on duty as an observer and was not in the chain of command.
- Tyler has no direct line to General Short or Admiral Kimmel.
- Next man in the chain of command was Major Bergquist, operations officer of the Hawaiian Interceptor Command.
Would an alert have mattered?

<table>
<thead>
<tr>
<th>Time Line</th>
<th>Actions that would have been needed</th>
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<tr>
<td>□ First wave spotted at 7:02</td>
<td>□ Interpret the radar blips</td>
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<tr>
<td>□ Lt. Tyler receives message at 7:20</td>
<td>□ Contact Berquist, Operations Officer</td>
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<tr>
<td>□ Bombing begins at 7:53 a.m.</td>
<td>□ Commanders determine response</td>
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<td>□ Give orders to ships</td>
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<td>□ Give orders to planes</td>
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USS Ward sighted and attacked a Japanese midget submarine at 6:53 in the morning. The information on this attack does not reach Kimmel until 7:45 AM, just a few minutes before the attack.
Who was responsible?

- Both Admiral Husband E. Kimmel and General Walter Short, commanding officers in Hawaii were held responsible for the attack on Pearl Harbor.

- No blame was assigned to George Elliott, Joseph Lockard or Kermit Tyler.
Did Radar Work?

The failure to warn the Army command was not a failure of the technology as much as it was a failure of organization.

- Yes, radar did work as intended.
- The use of radar was not fully incorporated into an integrated air defense system.
- There was no way to accurately assess the information and communicate this knowledge to those in command.
- The Army aircraft remained on the ground and Army high command did not learn about the Opana radar sightings until after the attack.
Kermit Tyler

- Kermit Tyler was singled out forever as the man who told Elliott and Lockard “don’t worry about it”.
- Tyler went on to have a long and distinguished career in the Air Force but always had to explain his role in the events of December 7, 1941.
- In December 2006 Tyler made his last public appearance on this matter.

http://www.c-spanvideo.org/program/HarborAt
Historic Significance of Opana Site

- Illustrated the immediate value of technology in modern warfare.
- Radar was quickly developed and incorporated into U.S. military operations.
- Demonstrated advanced weaponry that would give the United States the edge to secure victory.

National Park Service, Opana Radar Site, NHL nomination, 1994