

RADAR

Radio Detecting and Ranging The SCR-271

By the late 1930s, both the U.S. and Britain were developing radar systems. The first fixed radar system, the SCR-271, was used early in WWII. Built for long-range detection, it was able to locate enemy aircraft up to 150 miles away.

Constructed of steel, with a special copper coated steel dipole, the radar's antenna, described as a king-sized set of bed-springs, was mounted on a 100 foot platform and placed on a high mountain peak or ridge. In many cases the most difficult and costly construction of these installations was the access route to the mountain tops, such as the Harbor Mountain Road in Sitka.

Given the anomalies of atmospheric conditions over the Pacific, the vastness of Alaska, and the limitations of the equipment, as well as its vulnerability to attack, the system was considered inadequate. In 1943 the SCR-588 was introduced and, by the nature of its technical capabilities, quickly replaced the highly criticized SCR-271.

1942 photos from Richard Pettinger, Don Lookingbill, and Phillip Gold collections at the Isabel Miller Museum-Sitka Historical Society.

This brochure was prepared with the help of United States Forest Service "Passport In Time" (PIT) volunteers in partnership with the Sitka Historical Society.

A special thanks to all those who shared photos and memories.

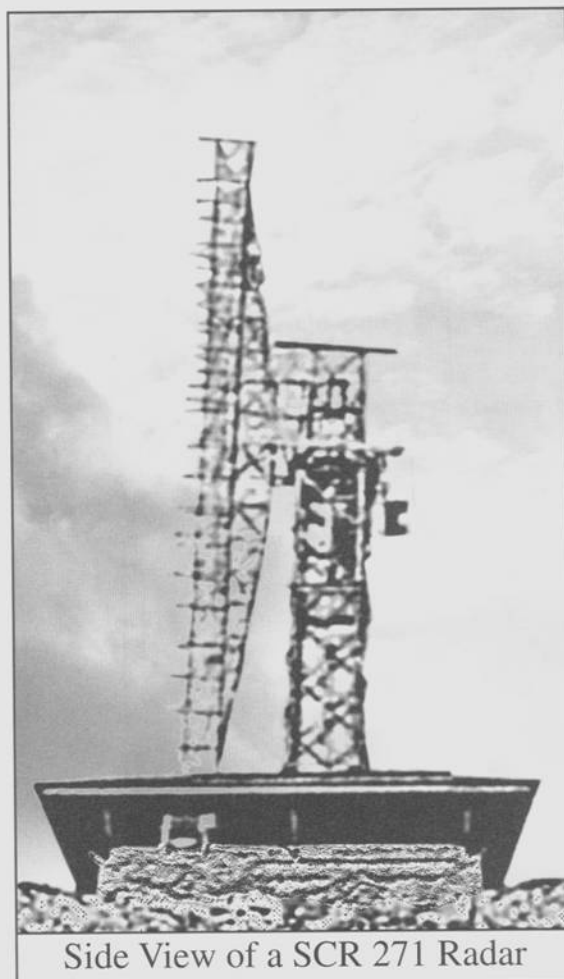
HARBOR MOUNTAIN
SITKA, ALASKA



P.I.T. INTERPRETIVE
PROJECT
1997

A Secret On The Mountain

Sitka's World War II Radar on Harbor Mountain



Side View of a SCR 271 Radar

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Harbor Mountain from Fort Ray, 1942



FORTS ON THE ISLANDS . . .

As tensions between the United States and Japan increased in the early years of the 20th century, military planners began to realize that Alaska could play a vital role in a Pacific conflict. Alaska, as the northernmost corner of a strategic triangle stretching south to Hawaii and Panama, would hold a key position in America's front-line defense. Within flying range of Japan and America's Pacific Northwest, Alaska's defense would depend on denying the enemy a strategic foothold within the territory.

The Harbor Mountain radar was the culmination of a dramatic military buildup in Sitka. The buildup began in 1937, with the establishment of the first Navy seaplane base in the territory on Sitka's Japonski Island. With tensions between the U.S. and Japan continuing to mount, plans were made for a \$3 million dollar expansion of the new facility. By late 1939, the base had evolved into a Naval Air Station; before the war's end, more than \$25 million would be spent on the facility.

To protect the Naval Air Station, the Army established Fort Ray on nearby Charcoal and Alice Islands. An elaborate system of defenses to protect against attacks from air or sea, the base was begun in the spring of 1941. Although never completed, Fort Ray became the second-largest harbor defense system in Alaska.

With the Japanese attack on Pearl Harbor, the war came to America. Tokyo Radio reported that Anchorage and Sitka had been captured; Canadian radio reported that the entire territory of Alaska had fallen. Neither was true, but within several months the Japanese had captured much of the Pacific, and many wondered if Alaska would be next.

In May, 1942, American commanders learned that Japan was indeed planning an attack on Alaska: at least Dutch Harbor in the Aleutian Islands, and perhaps the

mainland as well. Sitka's military buildup continued at a now-frantic pace. Construction costs quickly exceeded \$35 million, and within a year, more than 10,000 soldiers and sailors were stationed here.

Although Sitka's residents were quite aware of the defenses being built across the channel (an explosive mishap during construction on Japonski Island shattered windows throughout town), few if any knew about the top-secret radar installation being built behind them on Harbor Mountain.

A relatively unheard of technology at the time, radar had been planned for Sitka as early as the fall of 1940. While the radar was originally anticipated to be operational by August of 1941, little was completed that year except a bulldozer trail leading to a high mountain ridge where only a foundation excavation was begun.

When a group of Signal Corps radar technicians arrived in March of 1942, they were surprised to find that their radar station had yet to be built. Working day and night with axes, picks, shovels and one small bulldozer, they constructed a new road to a lower knoll that was more suitable for the radar. In June, while Japan invaded the Aleutian Islands, installation of Sitka's radar was finally begun. By July 21st the radar was scanning the skies over the North Pacific for incoming enemy aircraft.

Working in daily shifts during the summer, the operators traveled the crude road from their base at Cascade Creek up to the radar. A storehouse, barracks and mess hall were built atop the mountain to provide accommodations for extended winter stays.

Within a year, the Japanese were evicted from the Aleutians and the threat to Alaska was gone. The Military presence in Sitka diminished rapidly. In 1944, the Navy closed its facility; by the end of 1946, the last Army personnel were also gone. The radar, too, disappeared, its dismantling as secret as its construction.



Site of Former Radar Tower

. . . RADAR IN THE SKY.

HARBOR MOUNTAIN RECREATION AREA

Tongass National Forest
Sitka Ranger District

"Radar installations were considered by the ACS (Alaska Communications System) to be perhaps the most difficult of any engineered ACS project."
ACS Bulletin Sept. 1945

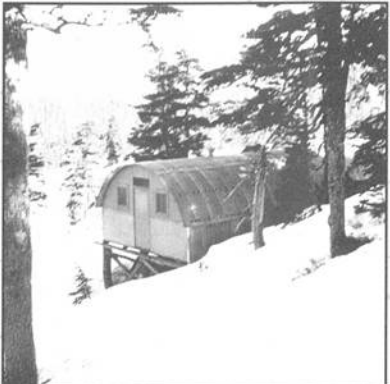


"For a long time we didn't even know there was a road up Harbor Mountain." Sitka residents remembering WWII



"We had a machine gun tower built on Harbor Mountain."
Richard Pettinger

Radar support facilities were situated around the circumference of this knob.



"This is the back side of one of the quonset huts that were used for barracks. It was a long drop if you went out that door."
Richard Pettinger

Remains of the plank road under the current boardwalk are a reminder of WWII.



"A crew working to build road to top of mountain where station was built."
Richard Pettinger



"This building housed the two big diesel driven generators for power to the radar site."
Don Lookingbill



"Our buildings consisted of 3 quonset huts, a wooden storage shed and a wooden privy."
Richard Pettinger

Concrete slab on which covered picnic shelter now rests, was the site of a radar shack and tower built in 1942.



"The inside of our radar shack on Harbor Mountain."
Richard Pettinger



"Inside one of the quonset huts on Harbor Mountain. This was our home for long periods during cold and snowy weather."
Richard Pettinger

This concrete slab was the generator building foundation.

A collapsed wooden tower and four excavated holes. Area served as a lookout and communications site. It was also considered for a gun emplacement in 1939 and a radar site in 1941.

"We felt very patriotic so did not even try to go into restricted areas." Sitka residents remembering WWII

"It is estimated that one Southeastern installation cost more than \$200,000. However, the purpose served by radar was such that used effectively once, it has paid for itself." ACS Bulletin Sept. 1945