

# LORAN STATION HAWAII

## 1969 Station Information Book

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by the LHI Team



**U.S. COAST GUARD**

**LORAN STATION**

**HAWAII**

**General  
Information  
Book**

**1969**

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## STATION HISTORY

1. Loran Transmitting Station Hawaii was originally built in June of 1944 by a Navy Construction Battalion and consisted of seven quonset huts on about twenty acres of land at 20°15' North latitude, 155° 54' West longitude. It is located at Upolu Point, District of North Kohala, Island of Hawaii, and is near the small town of Hawi.
2. It was designed to transmit Loran A pulses as a slave station, and was paired with LORSTA MOLOKAI on rate 2L4. The station was built when Loran was still in the developmental stage and has seen Loran A progress from its early and unreliable beginnings to the fully automatic, 99.9% reliable aid to navigation that it is today. With the addition of Loran C in 1961 this station has acquired one of the most advanced methods of electronic position fixing known. Yet the station and its equipment continues to change, to progress; for this is the measure of our technological advancement, and a vital link in the chain of our national security.
3. Installation of the original Loran A transmitters was completed in August of 1944, and the station became operational in January 1945 as a unit of the 14th Naval District.
4. In August 1947 new and better equipment, UE-1 Timers and TDP-1 transmitters, replaced the original gear. Two years later work commenced on permanent buildings to house the men and equipment. Most of the quonsets were abandoned and removed when the permanent buildings were completed in March 1951. Between June and November of the same year, new water and telephone lines were run in from nearby Kokoiki. Water comes from the Hawaii County Board of Water Supply in pipes that run well back into the rainy Kohala Mountains. The Hawaiian Telephone Company installed and maintains the telephone lines and equipment lining the station to the International Bell System.
5. A water purification system and storage tanks, drainage ditches, paved roadways between buildings, a new antenna ground system, and a new water distribution system were completed in the fall of 1951.
6. Once again, newer and more modern equipment, the TEH transmitters, were installed and became operational in November 1951. Loran A continued to progress towards greater accuracy and reliability. In November 1953, almost before the bugs were worked out of the TEH, the new T-325/FPN transmitters replaced them, and CU-277/URT antenna couplers were installed. In May 1954, T-138 amplifiers boosted the output of the Loran A pulse to a powerful 1,000,000 watts; and in the laboratories electronic engineers in research began to talk about a new concept ... Loran C.

But it would be another seven years before this system would become operational in the Central Pacific, and meanwhile Loran A continued to grow and advance.

7. On June 2, 1955 the station shifted to commercial power from Hilo Electric Company, and the diesel generators were relegated to a standby status. That was a welcome change for station personnel. No more generator watches, and far less maintenance. In August the 280' steel transmitting tower was erected for Loran A, and the coverage area increased as a result. AN/FPN-30 timers, the latest development, replaced the obsolete UE-1 in November of 1955, and once more Loran A became more reliable to the user. The AN/FPA-2 replaced the old UM Switchgear providing more continuous service and less off air time.

8. Then, in August of 1960, construction began on the combined Loran A and C station that exists today. About 80 acres of land were acquired, bringing the total to nearly 100 acres, to accommodate the skyscraping 625' steel tower and the massive ground system necessary for Loran C transmissions. The contract for the construction went to Fisher and Walsh Company of Honolulu at an approximate cost of \$1,300,000.00. All existing buildings and equipment, with the exception of the Loran A signal Building were removed and a totally new station constructed on the site. The buildings are of sturdy concrete block with prestressed concrete beams and ceilings, and concrete slab floors. They are designed to be typhoon and earthquake proof and to last for many years with a minimum of maintenance.

9. Loran C timers and transmitters built by the Sperry Company were airlifted to Hawaii and installed in January 1961. This station transmitted the first Loran C signals in the Central Pacific. On 2 February the AN/FPA-3A Switchgear for Loran A was installed, and rate 2L4 became a semi-automatic, Type III operation. In March 1961, LORSTA MOLOKAI was decommissioned, and rate 2L5 was made operational, with LORSTA HAWAII the master, LORSTA KAUAI a double slave.

10. The new station was completed on 2 June 1961, and officially became an "A-C" station at 0000Z, 6 June 1961. The station personnel allowance was raised to 1 officer and 24 men and the task of making a home out of new buildings and raw-cut earth began. Landscaping is an endless job, and 100 acres are a lot to cover with grass and shrubs and trees. Drainage, dust, and mud problems had to be met and licked with varying degrees of success. The six buildings and four duplex family units include most modern facilities for comfortable living and good operational capabilities.

11. In the spring of 1964 Group Hilo was disestablished and this station's aids to navigation responsibilities were expanded to include the entire Island of Hawaii. Two men were added to the personnel allowance. The functions that the old Group Hilo office performed as COTP Representative were also transferred to LORSTA HAWAII.