7th and Alameda stn.
A.F. Krenke 1903 at Los Angeles. downtown office 1903

Watermelon weed at the 7th and Alameda st station 1904.

Pacific Wireless Company at Mt. Tamalpais
Feb 22, 1906 just before the earthquake in S.F.

Construction crew left Krenke right Mr. Bradford making the coil form.

Pacific Wireless Company
Installation crew at Mt. Tamalpais Feb. 22, 1906 just before the earthquake.
United Wireless Stations

Photo by Gordon Haw. Right Eden Haw in the shop at Seattle.

The top floor of the building is occupied by the machine shop. Here the material in the rough is taken and the work of turning it into the various devices for sending aerogram is started.

The second floor is used as an office drafting room and testing room. On this floor also are located the nickel plating and polishing departments. A general store room and shipping room occupy the remainder of the floor. The wireless instruments are set up and tested thoroughly before going to the shipping room. The testing department is one of the most interesting places in the establishment. It is equipped with two memoty switchboards, from both direct and alternating current can be obtained, of almost any voltage desired. Every piece of apparatus is sent to the testing room and given what is known as the break down test. If and defect is discovered the instrument is returned to the manufacturing department.

United Wireless Station EE

Astoriam Oregon 1907 Alfred Ferland first operator in charge.

Oregon historical society
United Wireless Stations.

St. Helens Oregon "KE"

Left to right Cliff Watson, Jess B. Wee and Bill Vetter 6/21/1910

Cliff writes home:

Dear Mother and Father: This is a picture of the station. The engine room house is on the left and the operating room on the right. To the left, Watson the present nite man, Wee the day man and Vetter the former nite man. All well and like the work fine.

Cliff.

Unknown op in doorway 1909

United Wireless Station PX

Marshfield, Oregon.

The Marshfield station changed its name to Coos Bay, Oregon. Ships coming up the coast losing contact with Ureka FM shifted to copy PX until they could reach PC at Astoria on the Columbia River.

United Wireless Station

San Pedro "PJ" in 1911
United Wireless Station Shipboard Installation.

Bank of 12 Leyden jars on top of which is a helix shown at right, open core transformer underneath. Control Panel type & tuner loose coupler and antenna switch in left and center. Anchor gap above clock.

photo Nel Nelson Seattle in charge 1907-10

Marconi Wireless Telegraph Station
Blast Wireless Station PB at Ketchikan, Alaska 1912
Pacific wireless Co. Station Avalon Catalina Island 1903

A.F. Krenke standing in the doorway

Archer at the dock in Roche Harbor, Wash. The Archer carried lime made at Roche Harbor and was one of the earliest vessels on the West Coast to carry wireless equipment.

photo T.C. Smith Seattle

Sailing ship Archer at sea 1910
U.S. Army Stations
Norton Sound, Alaska.

U.S. Army stations
U.S. Wireless Telegraph station

U.S. Army Signals
Nome, Alaska, 1912
Equipment

Mineral Detector Holder &d. by E.I. Co.

This little device was used about 1905 to hold such minerals as carborundum, molybdenum and silicone for detectors. The pressure on the surfaces could be varied by adjusting the thumb screws.

Equipment - Murdoc 1 KW Rotary Spark gap transmitter.

Equipment

Kilburn and Clark Spark set 1917
Montana Power Co.

Station at Lewistown, 1916. Thompson Falls.

J. S. Dow.

Montana Power Co.

Great Falls, Mont. KEX K1Z Rainbow Plant. This was one of the chain of stations 300 miles apart connecting Lewiston, Butte, Rainboos and Thompson Falls. The stations were used for power dispatching. World War one closed them down. Engineer in charge was Cliff Watson. View show a 2 kW rotary gap, glass plate condenser and a Moorehead tube receiver.

Montana Power Co. Thompson Fall, Transmitter 1916.

Installed by Watson and Hallock. 20,000 volts and a rotary spark gap on 1600 meters.

Northwestern Power Co.
Station PNW Portland, Oregon. May 1914. Installed by Hallock and Watson.

United Wireless Co.
Installer G.L. Mellegen
(D.A. Cameron)
Operators

H.C. Capwell

Operator on the SS City of Seattle Pacific Coast SS Co.

Reggie Baer right and Bill Erick left on the SS Maui, Watson Line in 1920. This was Baer's last run for 20 years until WWII.

Operators

Reggie Baer left.

1915 aboard the SS China, China Mail Co.
Operators

Reggie Baer and Bill Erick
SS President 1911
Pacific Coast SS Co.

Charles B. Cooper

Seated on the first radio-tailer at the Leadville, Colorado United Wireless Station in 1905. "CBC" in 1904 demonstrated wireless for Dr. Lee DeForest at the St. Louis Exposition. Later was an installer for United and then organized the Shipowners Radio Service in Seattle, Wash. Now retired on Long Island, well known on the West Coast and one of the really old-time wireless men.

Operators

Syd Pass on the SS San Juan, 1912
Operators

Left to right: Jim Grouse, Walton W. Nee and Ralph Norgard right. They were on the SS General Lee in 1935.

VIA AIR

Operators

H. Campbell at Eureka "PA", July 23, 1912

VIA AIR

Operators

Malarin, 1911

Hiring agent for the Marconi Co. S.F. Calif.
Operators
Orin Mock, 1912
Aboard the SS Centralia a coastwise lumber schooner.

Operators
Marty Principe, 1918
Matson Liner SS Enterprise.

Operators
Syd Fass on the SS San Juan 1912
Manella
SS Cluna 1915
Operator Cliff Watson

See story on Watson for information

Walter Tease: Born in Portland and started going to sea with SORS in 1916. Was mostly on Alaska steamship company ships until he retired in 1934.

Joe Hallock
SS Alaska, 1917
Operators

George Hubbard

1911

George S. Hubbard wireless operator posess the distinction of having flashed the first alarming SOS signals from the Pacific steamer Liner "Asia" which left her bones on "Finger Rock", off the China coast in 1911.

Hubbard was on duty when the fatal crash came that imprisoned the Asia on the jagged rocks. Patience and persistence in attention to his key and sounder soon rewarded him that his signals of SOS had been received in Shanghai. Soon speedy relief reached the hundreds of passengers left marooned on a small and desolate island, surrounded by a mob of maddened and bloodthirsty Chinese pirates who would not stoop to anything to gain much coveted treasure believed to have been placed onboard the liner before her departure from Hong Kong. Hubbard later served on the "Sierra" and "Beaver".

Operators

Dick Johnstone standing in front of KHP masts, April 1917. When the U.S. Navy took over the coastal stations, there are two masts just the same height 250 feet and spaced 500 feet apart. The insulators were made of Oak and two feet long. Dick was on duty at KPH in 1916 when lightening hit this very mast and it knocked off 25 feet of it and burned all the receiving equipment. Marconi Wireless Co. owned the station at this time. During the war one KPH changed to WMO and went back to KPH in 1919. During the storm KPH was out. Cecil Cronkhite handled tkf from his station at the Presidio.

Operators

Wireless operator Jacobson on the SS Norwood which ran aground during a snowstorm in the inland passage to Alaska.
Operators

Cliff Watson at the Dwey Mine
near Grangerville, Idaho August 1906
Schmidt-Wilkes phones, silicone detector
and a three slide tuner "syntonizer"

Operators

Cliff Watson at the Electricians ball, Thompson Falls Mont.
Dec. 1916. Cliff demonstrating a Tesla coil powered
from the station's power supply.

Operators

W.A. Vetter and Wood. Operators on the SS Bear, 1910
at the Portland Exposition.

Vetter 4731 17th st. S.F. Bill operated at KE, St. Helens, Ore. 1911-12
Operators

Front row left to right: J.D. Philbrick, G.S. Hubbard, W.J. Hanahan
Back row left to right: J.B. Wood, E.D. Stevens, W.A. Vetter.

Herb Slocum Naval Engineer onboard the USS California

Right Jack Wiehr second op on the *Admiral Schley* 1912
SS Asia, April 23, 1911
River Pirates boarding her.
See George Hubbard's story.

Early Amateur Stations

SS operated by Eugene Skinner in 1909
Main contact, Pacific Coast SS Co. and local contacts.
Sometimes Navy ships in Magdalena Bay 500 miles south were contacted in 1910

SS Senator, 1912
Many an old timer will remember the "Cigarette of the Pacific"
Called this because of the tall stack which occasionally caught on fire and then burned up the wireless antenna.

During the day time the Senator could contact shore when she was 300 miles at sea. Signals did not fade out so rapidly over the water. At night she could contact Astoria, Ore. from Unimak Pass beyond the Bering Sea.
SS Humbolt, 1913

SS Admiral Evans steaming up the West Coast.

Fug Tatoosh
Ships

Tug Voliah in Arutum Bay, Alaska. At that time she with her sister ship were the most powerful tugs on the Pacific Coasts. She was taken over by the navy in 1913 and last heard from convoying the surrendered German Fleet into Scapa Flow.

SS Oliver Olson

Many young wireless operator made his first trip on this old coast-wise lumber schooner traveling from the Northwest to San Diego, Calif. around 1910-1912

Lumber Schooner J.B. Stetson, 1911
Ships

SS Admiral Schley, 1913

USS Saturn in Alaska during radio expedition about 1918.

Ships

SS Starr tied up at the dock in Alaska. Dexter Bartlett operator at the time.
Ships

SS Victoria one of the early ships to carry wireless. The ran between Seattle and Nome, Alaska.

Ships

SS Lansing

Ships

SS Ventura
Ships

SS China, 1917

SS Santa Rosa wrecked near Point Arguello
July 7, 1911

SS Washtenaw, 1910
SS Norwood - deck scene.

SS Norwood ran aground during a snowstorm in the inland passage to Alaska.

J. F. Hammel Operator.

SS Victoria

Stuck in the ice.

SS Victoria "WAD" launched in 1870 for the Cunard Line was queen of the Atlantic for many years. Transport during Spanish American War and then sold for junk in 1957. She had been used by the Alaskan Steamship Co. It was the oldest passenger ship afloat being built of iron did not rust and made a good ship in the bearing sea.

Donated by Dexter Bartlett.
Ships

SS City of Los Angeles KO2C

Ex-German ship "Kron Prinz de Gross".
Duke Hancock Chief operator 2 years. Second op Cameron and 3rd op William Sommers.

2 KW 500 cycle quench spark and 5 KW Federal A.C.

City of Honolulu taken the next morning Oct. 13, 1922
from the deck of the SS West Farallone KDSX.

Wireless Shack SS Lurline, 1912
SS Crook anchored at Anchorage, Alaska.

Dexter Bartlett photo

SS West Farallone

Rescue ship for the City of Honolulu. Picture taken from the deck of the USAT Thomas.
Ships


[Handwritten note: "Trip to Rome 1917"]

SS Nevadan about 1912. Telefunker 2 KW spark set. Every time the transmitter was keyed the ships lights would go out.

RCA Hawaii

How the masts are erected at Koko Head. The masts arrived in short half sections. They are bolted together in the manner shown. The cage rises with the work. This method the mast construction is reliable and rapid. A 475 ft mast being erected in four days.
U.S. Naval Ship Shacks.

USS New Jersey, 1914.

This photo presents an excellent opportunity to compare the old and the new in Naval electronics. On the left is the series antenna condenser used to tune the higher wave lengths. The big switch is the wave changer.

City of Honolulu KUSD

Picture taken from the SS West Farallone KDSX. SS sent 800 miles out from Los Angeles with 5 KW Poulson arc transmitter. 1922

Naval Ship Stations

USS Cuyama, April 1917

Shown at the top, loading coil and transformer. The quenched gap is behind the blower.

U.S. Naval Ships.

USS Ward, Nov. 1918

Top left, pancake loading coil, next to it the RF ammeter, then the lightening switch. Underneath the loading coil is the coupling unit and wave changer.

In the lower left corner is the 500 cycle rotary gap, back of it the power transformer 20,000 v.

Next to the transformer is the quenched spark gap.
U.S. Naval Shore Stations

NPX loading coil about May 1920.

U.S. Navy Shore Stations.

U.S. Naval Radio Station at Cordova, Alaska, 1918.

Operating position of Mile 14. Station could be controlled from Mile 7 at Valdez, Alaska.

Navy Shore Stations

U.S. Naval Radio Station Point Arguello, Calif.

Shot of the old tower coming down.
U.S. Naval Shore Stations.

NPK Point Arguello, Telefunken Equipment.

U.S. Naval Shore Stations.

NSS Anapolis, Md. 1918 500 KW. Arc. Solid metal magnet and field coil

U.S. Navy Shore station

U.S. Naval Radio Station NPL
San Diego 1916. East tower 600 feet high.
U.S. Naval Shore Stations

NPL San Diego 200 kw arc, 1913

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NPL Pt. Loma about 1905

Left coherer detector. On wall hot wire ammeters and in front of it the primary and secondary conductive coupled oscillation transformer. Spark gap inside the muffler. Below it is the glass transmitting condenser, back of it the high voltage transformer. To the left of the condenser is the transmitting key.
How many of you could start the arc? First you bring up the DC voltage to about 500 volts, then turn on the alcohol or gas. Then when the chamer is clear of air you pushed in the cathode carbon rod which draws and arc. After it is going for a few minutes you shift over to the ignition keyer. Each keyed character would break the arc.
Station in China put up by Joe Hallock

Chain of stations for the Chinese government. Bamboo scaffolding to erect a mast.

U.S. Naval Radio Shore stations.

Mare Island Radio crew about 1922. These fellows put up the 400 ft wood towers and stations on the West Coast.

Back row left to right, ninth man is "Charlie Underson", ship's carpenter. 11th man is O'Hara.

Second row, left to right 11th man Mr. Pratt. Front row left to right "Mike" Esposito antenna rigger.

25th Joe Ayall, leadingman antenna rigger. 26th man Gilbert W. Cattel in charge of the radio laboratory. 27th man Floyd Quackly underwater sound and radio compass man. 28th man Bill Sommer, radio shop supervisor. 29th man Robert B. Stewart, district WO office manager and former Chief at NPL. 30th man George Han O'Hara Master radio electrician.

32nd man James B. Upchurch, asst radio shop supervisor 34th Lei Kumilike asst radio laboratorian.

U.S. Naval Radio Shore Stations

Raising top most tower at

NPV Seward, Alaska 1917

Cliff Watson lead off, an man
U.S. Naval Shore Stations.

Seward, Alaska. NV

Picture of towers taken right after installation by Hallock and Watson in 1918. This US Naval Station was located about six miles out from town. The transmitter was a 5 KW quenched spark gap feeding into a six wire inverted "L" antenna. The operating and engine room building is shown on the right center. This station was part of the Sitka, Kodiak, Cordova and Dutch Harbor network.

U.S. Naval Shore Stations

NFB, Sitka, Alaska 1918.

Operating position with new wave changer installed.
Federal receiver with marble panel and litz wire.

U.S. Naval Shore Stations.

Operating position NFB NFV 1918

De Forest Audion Box and 5 Kw quenched spark gap. Two antennas were used for long and shorter waves.

During the winter months, snow static was especially bad in Alaska where the installing engineers were snowed in. Sometimes they couldn't even contact a ship they could see coming in the harbor. Then on clear days they might work 1000 miles.
U.S. Naval Shore Station

NPR Dutch Harbor, Alaska

On the left is the receiver. Near the front is the coil switch for 600 meters, 756 meters, 952 meters, L200 meters and 2400 meters. These were called waves J, L, M, Q, P and so labeled. The station used a standard 8 wire antenna.

U.S. Navy Shore Stations

U.S. Naval Radio Station FLZ at Croix D' Hins, France

This station ran a full one million watts in 1919.

Eight towers, 800 feet high.

Frequency shift keying on about 15 kc. Station installed by Joe Hallock or the Poulsen arc.

U.S. Naval Shore Station

Loading coils at NPV, 1918. Operating position shows antenna switch insulators. These insulators were made by Telefunken and sealed with lethard and glycern. During their construction some water must have gotten seal inside. When engineer Watson cranked up the power, the steam generated blew the insulator apart and it went across the room through the wooden shack wall.