

# The Radios of Pan American Airways Out of Alameda

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PBS has just done a video about Pan American Airways in the 1930s – '40 era with help from the Antique Wireless Association.



Clipper over the San Francisco Bay; AWA screenshot

The PBS video *Across the Pacific*, done in association with the Pan Am Historical Foundation ([www.panam.org](http://www.panam.org)), emphasizes radio, both communications and direction finding. Pan Am flew its flying boats out of Alameda, California, now famous as the home of the California Historical Radio Society.



Arriving at Alameda; Pan American Historical Foundation Photo

The Society of Wireless Pioneers, now a program of CHRS, included Pan Am history and its radio operators. An article in the SoWP *Sparks Journal* discussed the direction finding work:

“Hugo C. Leuteritz, the Chief Communications Engineer of the company, examined what was available throughout the world in the way of radio direction finding gear and concluded that the British ‘Adcock’ system showed the greatest promise of being adaptable to use on high frequencies. He and his assistant, Frank W. Sullinger, commenced such an adaptation and after much experimentation came up with a version of the Adcock HDF they believed would do the required job. A unit was constructed at Miami and was tested extensively by aircraft on regular flights. The performance was deemed satisfactory and a go-ahead was given for fabrication of a sufficient number of units to support the trans-Atlantic operation which was contemplated for the near future.... it was decided in mid 1934 to start a trans-Pacific service.... Accordingly the number of Adcocks to be manufactured was increased and six systems were shipped to San Francisco for the FAA Pacific Division then being formed. During 1935 they were installed at Alameda, CA; Mokapu Point, Oahu; Midway; Wake; Guam and Manila, P.I.”

See: *Sparks Journal* [of the Society of Wireless Pioneers], Vol. 6, No 2, Dec. 1983, page 16, *Sparks Across the Pacific* by Captain Almon A. Gray, USNR - Ret, SoWP 810-P.

As told in *Across the Pacific* Leuteritz, who had previously worked for RCA before jumping ship to Pan Am, knew the importance of Radio Direction Finding capabilities. An early Pan Am flight test of air-to-ground CW communication in a land plane on which he was the radio officer had veered off course and became lost. The plane’s regenerative receiver being out of order, no RDF information from Pan Am's ground station (equipped at that time with a simple loop antenna) could be received. The plane soon ran out of fuel and was forced to ditch in the Gulf of Mexico, killing one passenger and seriously injuring Leuteritz himself.

## Leuteritz at Alameda - 1935



Clipper with Alameda Adcock Antennas; AWA screenshot

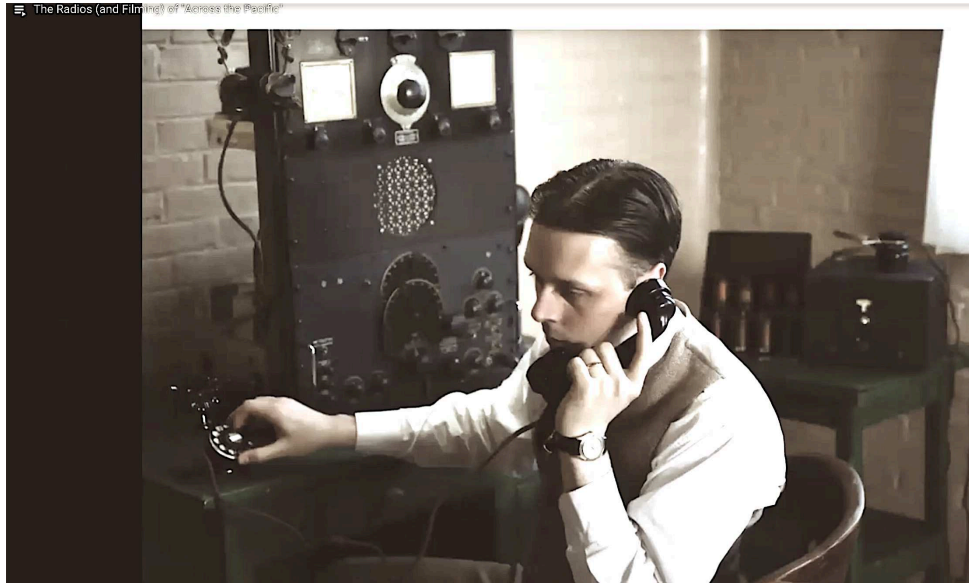
The Adcock<sup>1</sup> arrays were very big antennas for HF (high frequencies, the primary wavelengths for aircraft at the time). In Alameda they would have stood at least as tall as the iconic shipping cranes do now. A still (above) from the AWA video shows the antennas and a Clipper.

In the second graphic above, a Pan Am Clipper comes down on the water in Alameda. It looks like antennas may be seen next to the building on the top left.

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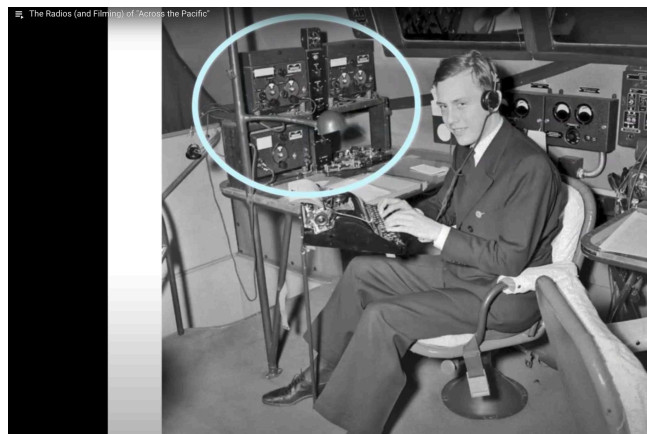
<sup>1</sup> Inventor Frank Adcock of the British Army was not the famous Frank Adcock of WW I British Naval Intelligence.

Nearby is an “atmospheric” studio photo of the actor playing Leuteritz at realistic 1930s props of an RCA 60 receiver and a National AGS (Air Ground Station) receiver.



Actor playing Leuteritz with radio receivers from AWA;  
AWA screenshot

AWA members contributed most of the period equipment in the video. According to the video, Pan Am bought and frequently modified commercial gear, especially National Radio Company radios. Pan Am favored its SW-3, at least as a basis for development.



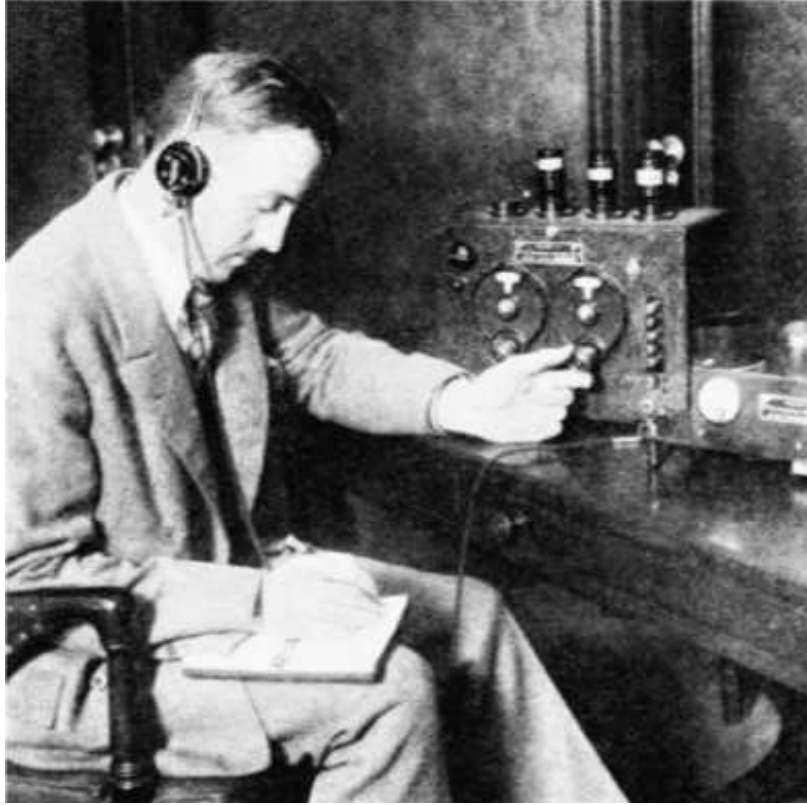
A Pan Am Radio Officer on Deck, 1930s;  
AWA screenshot



Pan Am aircraft model ATM receiver 1930s with coil box;  
AWA screenshot

Several of the nearby photos come from the Pan Am Historical Foundation, with which co-author and Deputy Archivist (and PAHS member) Bob Rydzewski has been working; many come from the AWA video about providing the radios (identified as AWA Screenshots):

<https://www.youtube.com/watch?v=Mxo5xX9RtMg&list=PLLTogcYJemH767GmCRNo5n4mryV1Ssg0c&index=2&t=0s>



The real Hugo Leuteritz and some of the equipment he designed. From *Radio News*, April 1931, p. 886.

Co-author Bob Rydzewski has covered Hugo Leuteritz and early Pan Am radio communications in: Robert Rydzewski, *Zeh Bouck, Radio Adventurer, Part 2: The Pilot Radio Brings Good Will to Central America* (AWA Review, Vol. 31, p. 173-210, 2018). You can also read about Leuteritz and the perils of aviation without RDF at the PAHS website, <https://www.panam.org/images/Stories/FirstCrash/Pan-Ams-First-Crash.pdf>

It all goes to show that when you're over the ocean, you really want to have good radios, in the air and on the ground.

(23 VIII 20 v3.1, de K6VK) ##