Early Navy Radio Communications in Guam, Marianas Islands

"NPN"
Early Navy Radio Communications
in
Guam, Marianas Islands
NPN

Prepared for the OLD TIMER COMMUNICATORS by George B. Todd, LT USN RET
with grateful acknowledgement to the following sources:

ALVEY, Anthony G.  RMC USN RET
BURNEIT, Sidney A.  CRE USN RET
HOOK, William F.  LTJG USN RET
MANLEY, Harold M.  FSS3 USIA RET
MEADORS, William H.  CAPT USMC RET
OWENS, T. Earl  CRE USN RET
REBER, John J.  LTCOL USMC RET
RHODES, Clarence G.  LT USN RET
SAWYER, Carl E.  CIVIL SERVICE RET
TROTT, John W.  CDR USN RET
WILLIAMS, Carl J.  CIVIL SERVICE RET
WINTERS, Harold M.  LCDR USN RET
YOUNG, Joseph R.  LT USN RET

Dr. Dean C. Allard, Head, Operational Archives Branch, Naval Historical Center, Washington Navy Yard, Washington, D. C.


1917 annual report of the Pacific Coast Communication Superintendent.

The Guam RECORDER.

Vista, California MORNING PRESS.

Society of Wireless Pioneers SPARKS JOURNAL.

ISLANDER a supplement to the Sunday News, Guam Publications, Inc.
CONTENT:

Background History.

Early Navy Radio Communications.

APPENDIX

Reprint of an introduction, by Fleet Admiral Chester W. Nimitz, to the "History of Communications - Electronics in the U. S. Navy."

Naval Governors of Guam.

Lists of radio personnel at Guam, with some photographs.

Miscellaneous photographs of Guam.

Photographs of 50 American Prisoners of War in Zentsuji Camp, Japan, during World War II.

"Guam Diary" reprinted from the Guam RECORDER. The diary was written by one of the Navy nurses who was at Guam at the time of the Japanese invasion of the Island.


Personal recollections of William F. Hook, LTJG USN RET.

Personal recollections of Anthony G. Alvey, FMC USN RET.

Personal recollections of Harold W. Manley, FSS3 State Dept. RET.

Personal recollections of Clarence G. Rhodes, LT USN RET.

Personal recollections of Harold M. Winters, LCDR USN RET.

Personal recollections of Carl E. Sawyer, Civil Service RET.

Personal recollections of Joseph R. Young, LT USN RET.
Guam is the southernmost, and the largest, of a group of fifteen islands in the Marianas. It is located at about 145° east longitude and 14° north latitude. It is about 1400 miles south of Tokyo, Japan; 2000 miles east of Cavite in the Philippines and 3500 miles west of Honolulu.

The earliest inhabitants of Guam were Chamorros. Guam was brought under control of Spain in 1564 and remained under Spanish law for over 300 years.

When the United States went to war with Spain in 1898, Admiral Dewey's Asiatic Fleet quickly destroyed a small Spanish fleet, based in the Philippines, in the Battle of Manila Bay, May 1, 1898.

After the Battle of Manila Bay, Dewey sent a message to the Spanish commander proposing that both belligerents be permitted to use the cable between Manila and Hong Kong. This proposal was refused. The cable company's Philippine concession stipulated that no messages forbidden by the Spanish Government would be transmitted over the cable between Manila and Hong Kong. Since it was only of value to the Spanish defenders, the cable was severed, at Dewey's direction, on 5 May. No effort was made to haul its seaward end on board ship to reestablish communication with Hong Kong. Not being able to use the cable from Manila, Dewey was forced to send a despatch vessel with the report of his victory to Hong Kong for cable transmission to Washington, where the message arrived 7 May. Had the cable remained intact there would have been no further fighting after 12 August, for on that date, as U. S. troops were moving in to attack and occupy Manila, the peace protocol was being signed in Washington. Dewey received this information on 16 August, four days after the Spanish surrender.

The severing of the Manila-Hong Kong cable established a precedent. Shortly thereafter, the Navy Department directed the severing of cables landing in Cuba in order to isolate the Spanish commander from his homeland. This was accomplished on 4 June.

As a result of the lessons learned during the conflict, the U. S. Government insisted that a proposed cable between the United States and the Philippines land only on soil under U. S. sovereignty. The cable company was completely in agreement but insisted that the Navy Department lend full assistance and backing in the acquisition of the necessary islands, either by treaty of peace with Spain or by purchase.

Shortly after the war with Spain had commenced the USS CHARLESTON and three troop transports were despatched from San Francisco to Manila to join Dewey's forces. On the way, the CHARLESTON and her convoy arrived at Guam where the armed forces on the island surrendered to a landing party from the CHARLESTON. The CHARLESTON and her convoy then proceeded to the Philippines.

The USS BENNINGTON was sent to occupy Wake Island and Guam in the name of the U. S. Government. The BENNINGTON arrived in Guam on January 23, 1899 and after formal ceremonies, Guam became a possession of the United States. President McKinley placed the Island of Guam under control of the Department of the Navy.

In September 1898 Germany purchased the Carolines, the Palaus and all of the Marianas, except Guam, from Spain. The Japanese joined on the side of the Allies in World War I. After Germany was defeated and the armistice was signed, Japan was given a mandate over those German held islands.

Guam was not involved in any actions during World War I. There were a few feints and skirmishes by the German ships from the northern Marianas but no actual conflicts.
The main town of Agana is located on the western side of the island about midway between the northern and southern tips of the island. All of the Government buildings, including the Government House, the hospital, the jail and the bank and stores are situated around the Plaza de Espana.

Sea transportation was available in the Navy transports CHAUMONT and HENDERSON and the Army transport USAT GRANT. The latter provided frozen meats and cold storage supplies from the U. S. The USS GOLDSTAR, station ship at Guam, made trips to the Philippines, China and Japan to bring back coal for the island power plant and supplies for the island’s merchants. The USS PENGUIN was the station tug. The SS Admiral Halstead brought heavy cargo from the United States.

Pan American Airways established bases on several of the Pacific islands, including Oahu, Midway, Wake and Guam in 1935. The first transpacific flight in the China Clipper, with Captain Edward Musick at the controls, began on November 22, 1935 from Alameda, California. It landed in Guam in December 1935. Air transportation became an important factor in maintaining contact between Guam and other points in the Pacific.

The deteriorating political situation in the Pacific in 1941 caused the Government to evacuate all American dependents from Guam. Almost all of them had left by October.

The Governor of Guam was ordered, on December 6, 1941, to destroy all classified materials.

The first Japanese bombs fell on Guam December 8, 1941 (Guam time) at about 8:30 am. The Japanese invasion fleet appeared on the evening of December 9. During the early morning hours of December 10, 5000 enemy troops landed on the beaches of the island. The defenses of the island were inadequate and, after a brief resistance, the defenders were forced to surrender.

On January 10, 1942, Governor George J. McMillin, marines, sailors, civilian construction workers and American residents of Guam were compelled to march from Agana to Piti where they boarded the ARGENTINA MARU and were sent to prison camps in Japan.

Guam was recaptured by the United States between July 21 and August 12, 1944, by Army and Marine forces. Fleet Admiral Chester W. Nimitz, as Commander in Chief Pacific Fleet and Commander in Chief Pacific Ocean Areas was appointed Military Governor of Guam. Shortly thereafter he moved his headquarters from Pearl Harbor to Guam to further pursue the Pacific war.

On May 30, 1946, the Military Government of Guam was declared at an end and the Naval Government of Guam was reestablished under Rear Admiral Charles A. Pownall.

The administration of the Island of Guam was transferred from the Secretary of the Navy to the Secretary of the Interior effective July 1, 1950.

* * * * * * * * * * * * * *

-2-
Early Navy Radio Communications
in Guam, Marianas Islands

The Island of Guam was acquired by the United States in 1898, along with Wake Island, as one of the landing points of the proposed transpacific cable, and as a coaling station for U.S. Navy ships transiting the Pacific. Wireless telegraphy had just barely been "discovered." Two decades would pass before Guam would begin to play a more important role in Naval transpacific communications.

When Guglielmo Marconi demonstrated to the U.S. Navy that his method of wireless telegraphy could enable the shore stations to communicate with ships out of sight of land, the Navy Department began to implement plans to establish a chain of wireless stations on each coast of the U.S. and another, higher powered chain across the Caribbean to the Canal Zone.

By 1906 the Navy had obtained from seven commercial concerns equipments for 57 ships and 39 shore stations, totaling 96, nearly half the total number of stations in the world. In the tests of those equipments which followed, ranges of up to 640 miles between ships were covered. Shore stations were established at 23 key points on the east and west coasts of the United States. A station in Panama gave acceptable communication with one in Florida, providing the required contact with the Canal Zone. Stations in Cuba and Puerto Rico provided additional coverage of the Caribbean. Installations at Pearl Harbor, Hawaii, and Cavite in the Philippines and on the Island of Guam, Marianas Islands, provided the first coverage of the Pacific.

The transpacific cable was landed on Guam on April 2, 1905. The Guam station had been equipped with a low powered spark transmitter which could not offer any competition with the cable station as effective communication distances with wireless sets in those years was only a few hundred miles.

As an indication of the inadequacy of radio communications in the Western Pacific at the start of World War I in 1914, a letter from the Engineer Officer of the Naval Station, Olongapo, Philippine Islands to the Commandant, Olongapo, dated September 29, 1914, is quoted:

"The apparatus at the Yard, a 5 kw Telefunken set, was recently transferred to Cavite and a 2 kw Telefunken transmitting set was received from Cavite and installed August 4, 1914. The greatest efficiency in transmitting with this 2 kw set has not been fully determined on account of the short time since its installation. The greatest distance a message has been transmitted up to the present time is 700 miles.

"The greatest efficiency in receiving has not been altered by the installation of the new radio set. As heretofore, this station is capable of reading the following foreign stations' General Public Correspondence under favorable atmospheric conditions:

<table>
<thead>
<tr>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsingtau, China (German)</td>
<td>approx 2000 miles</td>
</tr>
<tr>
<td>Quang-Tcheon-Wan, China (French)</td>
<td>1200</td>
</tr>
<tr>
<td>Sandakan, Borneo (British)</td>
<td>1500</td>
</tr>
<tr>
<td>Yap Island (German)</td>
<td>2500</td>
</tr>
<tr>
<td>Ose Saki, Goto Island (Jap.)</td>
<td>1500</td>
</tr>
<tr>
<td>Fukkikaku, Formosa (Jap.)</td>
<td>1200</td>
</tr>
<tr>
<td>Sungora, Siam (Siamese)</td>
<td>1200</td>
</tr>
<tr>
<td>Bangkok, Siam (Siamese)</td>
<td>1200</td>
</tr>
</tbody>
</table>
"This station has frequently heard Yap exchanging with Tsingtau at night, a
distance about 1860 miles."

"This station can exchange, regularly, day and night, at all seasons, with the
following stations, all in the Philippine Islands:

<table>
<thead>
<tr>
<th>Location</th>
<th>Station Type</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavite</td>
<td>Navy</td>
<td>43 miles</td>
</tr>
<tr>
<td>Grande Island</td>
<td>Army</td>
<td>7</td>
</tr>
<tr>
<td>Corregidor</td>
<td>Army</td>
<td>30</td>
</tr>
<tr>
<td>Manila</td>
<td>Army</td>
<td>45</td>
</tr>
<tr>
<td>Cuyo Island</td>
<td>Commercial</td>
<td>240</td>
</tr>
<tr>
<td>San Jose, Panay</td>
<td>Commercial</td>
<td>250</td>
</tr>
<tr>
<td>Puerto Princess, Palawan</td>
<td>Commercial</td>
<td>320</td>
</tr>
</tbody>
</table>

"This station can exchange with Zamboanga, distance 480 miles and, by relaying
in the daytime via Cuyo. It is believed that this station can still exchange with
Guam at night during December and January. A message was once relayed to Guam at
night via Yap."

At approximately the same date the Captain of the Yard at the U. S. Naval Station,
Cavite, P. I., reported to the Commandant the status of radio communications at the
Cavite radio station in a letter dated September 24, 1914:

"For operations in Asiatic waters, the radio station at Cavite would probably be
the main source of information to the Commander in Chief. The present installation has
a daylight range of approximately 350 miles and from 1200 to 1500 miles at night. A
steady communication is not possible under unfavorable atmospheric conditions, and the
range is greatly reduced. For efficient radio communication with vessels operating
at a considerable distance, a modern high power set, such as has been proposed for
Sangley Point, is necessary. With the present installation at Cavite there are no
foreign stations within range during daylight. Under usual conditions at night communi-
cation can be had with the station at Kelung, Formosa, and with Ose Saki, Goto Island,
Japan, under favorable conditions. These stations are both owned and operated by the
Japanese Government and would not be available for official business in time of war if
Japan maintains neutrality. There is also a station controlled by the Japanese Naval
Authorities at Makung, Pescadores Islands, with which communication could be had if
the Japanese Government would authorize it. At present this Station will not communi-
cate with foreign stations under any circumstances.

"A radio chain to northern waters could be established without the use of ships,
as follows: Cavite-Kelung-Ose Saki-Tsingtau or Cavite-Kelung-Ose Saki-Dalny, the
advisability of the foreign stations, of course, depending upon international relations.
The Tsingtau station has a daylight range of approximately 600 miles.

"In regard to personnel it is recommended that operators on the Asiatic Station
be required to become familiar with the Japanese radio code. It is believed that extra
compensation should be given operators who become proficient in the Japanese language,
especially in the use of Japanese script. Operators with this knowledge would be of
great value on the station."

The Guam Radio Station wrote a letter in July 1915 to the Bureau of Steam Engineer-
ing, Washington, D.C., via the Commandant, Guam, requesting a higher powered radio
transmitter for the station, stating that "It is highly important that radio communica-
tion be established with the Philippines and that is not now possible with the power
there is at the radio station."
The Bureau of Steam Engineering (S. S. Robison, Acting Head) forwarded the letter to the Superintendent of Radio Service with the recommendation "that the request be disapproved owing to the fact that the Bureau is proceeding with the construction of a medium power station in Guam which will meet all requirements." The Superintendent of Radio Service (W. H. G. Ballard) returned the letter concurring in the disapproval.

Guam was so low on the totem pole that the station was not even considered on the distribution list for the newer, higher-powered quenched gap spark transmitters in 1915.

When the Poulsen arc transmitter was found to be far superior to the spark transmitter for long distance communications, plans were made for a communication chain of high-powered arc stations across the Pacific. Guam was originally considered, along with American Samoa, as a possible link in the chain. When the first 100 kw arc transmitter was installed at Darien, in the Canal Zone, reliable communication was immediately established with Washington, D. C. Plans were changed to provide for installation of 350 kw arc transmitters at Pearl Harbor and Cavite, so that they could communicate directly with each other. Guam and Samoa were scheduled to receive only 30 kw arc transmitters for communication with Pearl Harbor or Cavite. When the chain was completed in 1918 it was found that reliable, 24 hour communication between Pearl Harbor and Cavite could not be maintained. It was necessary to relay transpacific traffic through Guam, however the 30 kw transmitter at Guam could not put a reliable signal into either Pearl Harbor or Cavite. Higher powered 100 kw arc transmitters were ordered for Guam. In the meantime, until the 100 kw transmitters were installed, traffic was relayed by Guam at the best communications times, mostly at night.

A separate transmitter station at Guam, in Libugon up in the hills, was constructed for the 100 kw transmitters. The transmitters were controlled from the Communication Station in Agana, utilizing overhead control lines on poles between the stations. The humid, tropical weather caused insulation breakdowns and resulted in frequent keying control outages.

The communication situation in Guam at the start of United States involvement in World War I in April 1917 is described in the 1917 annual report of the Pacific Coast Communication Superintendent, which is quoted below:

"U. S. NAVAL RADIO STATION, GUAM, MARIANAS ISLANDS (NPN):

"(NOTE: This station belongs in the Philippines Division but as its communications are an important factor in the service of the Pearl Harbor Communication District, its report is contained in that district. It is believed this station should be placed in the Pearl Harbor District, as the Guam Naval Station is under the Commandant of the Fourteenth Naval District, and the detailing of personnel for the Guam Radio Station is under the Pacific Coast Communication Superintendent).

"Located at Guam, Marianas Islands. Equipped with a 30 kw arc set adjusted to the following wave lengths: 5100, 6240, 7000 and 3000 meters. It is also equipped with a 3 kw 60 cycle composite spark set, working on 600 and 1800 meters.

"Radio communications: Arc set: Is effective with Pearl Harbor, Russian Island, Cavite and ships equipped with arc apparatus, dependent on their range. Also with Japanese stations. Spark set: Effective with ships equipped with spark sets, within range of 300 miles, depending on the ship's range.

"Comment: This station is authorized to handle commercial traffic. It is of military value in furnishing communication for the Naval Station, supplementing the cable, and for communicating with vessels of the Fleet in the Pacific."
Harold B. Phelps was stationed, as a Chief Radioman, at Wailupe (NRM), the control station for Pearl Harbor, from 1919 until 1922. He states: "When I went there in August of 1919, NRM had schedules with NPL (San Diego), NP (Tutuila, Samoa), NNP (Guam), and NPO (Cavite). There was no direct daylight communication with NPO or JJC (Japan). NPO broadcast to NRM at midnight. NP broadcast to NRM at 2 a.m. and NRM broadcast to NP at 9 a.m. None of those circuits were reliable at all times due to static and fading periods. We just kept traffic moving as best we could, all by hand, on low frequencies. Practically all traffic for Cavite and the Asiatic Fleet was relayed through Guam."

A similar situation existed when I went to NRM in 1923, however there was no communication between Pearl Harbor and Cavite even though the arc transmitters at both of those stations had been increased from 350 kw to 500 kw. All of the Asiatic traffic was relayed through the Guam station.

Guam had to share the Pearl Harbor 500 kw arc with the NPO-FREP intercept schedules between Pearl Harbor and San Diego every other hour. During those times the 100 kw arc at Heeia was used on the Guam circuit when that transmitter could "penetrate the ether" to Guam. Otherwise the westbound traffic was delayed until the 500 kw Pearl Harbor arc was again available. NRM, Guam, would send eastbound traffic blind at those times, getting receipts and giving RQ's later.

Traffic on the NRM-NPF circuit was heavy with lots of Navy and State Department traffic. Considerable traffic for the Japanese and Chinese Governments was also handled on this circuit. Most Navy stations were open to commercial traffic at that time, so some commercial messages for points in the Far East were relayed through NRM, NPF and NPO.

In 1925 Navy stations were experimenting with communicating on high frequencies. The amateurs had already demonstrated that long distance communications were possible on those higher frequencies. The Navy began rapidly supplying ships and shore stations with high frequency receivers and transmitters. In the meantime, until supply could catch up to demand, The Navy urged the shore stations to construct their own, home made equipments using the spark motor-generators for their power supplies. By 1927 most stations had constructed such transmitters and receivers, usually following the outlines and guides found in the Amateur Handbook, and were communicating with each other on an experimental basis. The Navy rushed Model RG HF receivers to most stations but distribution of HF transmitters took somewhat longer. It was not until 1928 or 1929 before all stations had been equipped with standard Navy models of high frequency equipments.

The Guam station constructed their own high frequency transmitter and a couple of breadboard HF receivers and communicated with Pearl Harbor and Cavite. Pearl Harbor began communicating directly with Cavite on high frequencies. Cavite even had a test schedule with NP in Samoa, as a possible relay point in case of failure of other channels. No one knew just how the new fangled frequencies would work out!

There were two 100 kw and one 30 kw arc transmitters at Libugon, Guam, plus the medium and high frequency transmitters, all controlled from the Agana station. After the high frequency circuit between Pearl Harbor and Cavite was effective, the only time the 100 kw arcs were used was when the NRM-NPO HF circuit was down.
When the NPM-NPO high frequency circuit was 100% effective, the Commander in Chief, Asiatic Fleet, decided that Guam no longer needed so many radiomen. He came to Guam and took most of the radiomen for transfer to Asiatic Fleet ships.

All of Guam's radio transmitters were still at the Libugon transmitter station in 1929, according to William F. Hook, who was stationed in Guam from 1927 until 1929. Sometime between 1929 and 1934 the medium and high frequency transmitters were moved to a newly constructed building in Agana, directly behind the Communication Station. The low frequency arc transmitters were probably dismantled and surveyed out of existence. Antennas for the Agana transmitters were suspended from towers erected on a hill behind the station. This new arrangement resulted in considerable interference with not only the Navy receivers but also with civilian radios in the vicinity. The Libugon transmitter station was transferred to the Security Group for their use.

After the Guam station was relieved from relaying transpacific traffic, the station reverted to a peaceful, two man watch with one man guarding the Navy ship-shore 355 kHz circuit, split foned with the 500 kHz distress frequency and the other man communicating with Cavite on high frequency. The ship-shore man also copied PRESS news from NFG and WOY on night watches.

Sometime in the early 1930's, the Commander in Chief, Asiatic Fleet, inaugurated a "Five Point" circuit on the 4125 kHz series (4125, 8250 and 16500 kHz. The 12000 kHz harmonic was not used). Stations on that circuit were: F5Q-CINCAF, NPO-Cavite, NPN-Guam, NPP-Peking and NJJ-Shanghai. This enabled all stations to communicate with each other and reduced the volume of traffic that needed to be relayed.

When the Pacific Fleet was moved from San Diego to Pearl Harbor in 1939, a FOX broadcast for the Pacific Fleet was instituted at NPM utilizing the high powered VLF vacuum tube transmitter there (Model TAW). Guam was instructed to copy the broadcasts, not only for traffic addressed to the Guam Naval Station but also for delivery to local Navy ships and for other Navy ships calling at Guam on their way to the Far East.

When the Japanese attacked Pearl Harbor on December 7, 1941 (December 8 Guam time), a circuit was reestablished between NPM and NPN. Clarence A. Porter, Chief Radioman in Charge at NPM at that time made this comment: "Shortly after the attack began, communication was reestablished between Guam and Radio Oahu. Unfortunately the communication was short-lived but during the period of time that it was in operation, the operators at Guam lived up to the best traditions of Navy radiomen. Their operation was flawless, their sending good and not betraying in any way the strain under which they must have been working."

Guam was captured on December 10, 1941. All Naval personnel captured were transported to Japan and spent the rest of the war in Japan as prisoners of war.

Guam was recaptured by U.S. forces between July 21 and August 12, 1944. Military Government was established. The Navy rushed materials and equipment to repair damages and to establish facilities for a forward base to control further progress of the war.

Clarence A. Porter, by then a Lieutenant and Communications Officer at the Wahiawa Control Station (NPM) wrote: "When CINCPAC shifted his headquarters to Guam in early 1945, a high speed point to point circuit connected Wahiawa and Guam. Wahiawa Primary, Secondary and Submarine FOX broadcasts were automatically re-broadcast by Guam. (At the end of the war Guam was re-broadcasting only the Primary FOX). In 1945 Guam relieved Wahiawa of several point to point circuits, but it was not until the last few weeks of the war that many activities afloat were served exclusively by Radio Guam or in many instances by Radio Manila (NPO). Advanced Headquarters JCA worked invasions, beginning
with Iwo Jima and Wahiawa established a circuit with the SOPA's communication headquarters ship immediately after the invasion began in order to take over in case of casualty to Guam."

At the end of the war, Wahiawa operated a multiplex point to point circuit with Guam. Radio teletype equipments were being rushed to all major stations. The NTX (tape relay) systems were being installed. However, rapid depletion of personnel caused major problems. Traffic became backlogged. The situation was not relieved until experienced personnel were pulled from the Fleet to straighten out the problems.

Excerpts from: U. S. Naval Communications Chronological History, Office of the Chief of Naval Operations, 1961:

1954 Naval Communication Station Guam moves into new permanent quarters with receivers and control at Finegayan and transmitters at Barrigada.

1958 Navy inaugurates tri-point Fleet broadcast in Western Pacific which keys transmitters at NPN-Guam, NDT-Japan and NPO-Philippines simultaneously.

Guam is now (1986) one of the major communication sites of the U. S. Navy in the Western Pacific. It is the Headquarters of the Communication Area Master Station Western Pacific (NAVCOMMSPATH). Everybody else in the Western Pacific is basically a satellite of Guam, including NAVCOMMSTA Philippines and NAVCOMMSTA Japan, among others.
Some years ago, Naval War College publications reminded us that Communications is the handmaiden of operations. While this appears obvious, there is no sounder lesson for a naval officer. From single ship, to force, to fleet, to Navy Department - all through the command echelon - effective coordination and ultimate operational success depends upon efficient communications. Therefore, when the Director of Naval History asked me to prepare the introduction to this history of electronics in the Navy, I was pleased to accept. It affords me opportunity again to express my appreciation to those who made possible the reliable, rapid, and secure communications which were essential to the successful prosecution of World War II in which operations covered the many millions of square miles of the Pacific.

Upon assuming command of the U. S. Pacific Fleet on 31 December 1941, I found a well-functioning communication system capable of great expansion. Could it expand rapidly enough to handle the far-reaching demands suddenly thrown upon it? It could and did, to my great satisfaction. Large quantities of electronic equipment and increasing numbers of installation and maintenance personnel began to flow to Pearl Harbor from the Electronics Division, Bureau of Ships, directed by Commodore Jennings B. Dow. At the same time, the Communications Division of the Office of the Chief of Naval Operations, under Rear Admiral Joseph R. Redman, supplied trained operators. Thus, the Pacific Fleet Communications Officer, Captain, later Rear Admiral John R. Redman, could expand Pacific Ocean area communications to meet all operating, logistic, intelligence, and other command requirements. This gigantic task was accomplished so efficiently that the Pearl Harbor headquarters was able to exercise complete and effective control of the operations of the far-ranging forces on, under, and above the sea. The radio silence usually imposed upon the forces afloat made absolute confidence in the integrity of our communications system a matter of paramount importance. This confidence was earned and well merited.

In the last year of the war when an advanced CINCPAC headquarters was established on Guam, Commodore E. E. Stone, later rear admiral, relieved Captain Redman and administered fleet communications in the same outstanding manner. To those officers and to all the people who served under them, civilian and naval, who made possible the growth and operation of the all-important communication system, I repeat my thanks for a vital assignment well done.

The marked success achieved by naval communications in World War II was not happenstance but was the fruit of long years of endeavor. Since the dawn of time man looked for better means to communicate over greater distances with speed and accuracy. To "pass the word" when beyond voice range, he learned to beat out his message on a tree trunk or drum head. Smoke and fire beacons gave him visual signals. He used swift runners to carry news in the days of classical Greece, and swift horses for the colorful Pony Express in the American West before the coming of the telegraph.

Until the present century, a ship's isolation was complete once she navigated out of port and sailed over the horizon. Of course, ships in company or in passing "spoke"
each other by voice hail, or signal flags by day, and lanterns by night. But once at sea, orders or instructions from higher commands not in company could not be easily altered. For want of communications, major battles have been fought after peace treaties were signed.

For centuries the ocean was both the great water highway of the world and a silent barrier. Radio raised the curtain to a vast and universal change. With the installation and perfection of the miracle of instantaneous wireless telegraphy, a radio-equipped ship would never again be totally cut off from land.

The U. S. Navy, in keeping with its traditional scientific leadership, early recognized the impact of radio on naval operations. Only by such means of communication could far-scattered forces be effectively directed. Admiral Bradley A. Fiske, while a lieutenant, experimented with "electronic communication" on naval vessels in 1888, many years before Marconi's successful application. During Fiske's investigations, he discovered the principles of degaussing ships as a protection against mines (used widely in World War II), and designed a system of radio control of torpedoes which forms the basis for the modern radio guided missile.

As the following documentary history records, the Navy's subsequent enthusiastic drive and encouragement to scientific research gave the initial impetus and support to what has become the vast electronics industry in America, an industry that plays such an important part in our military and civilian lives.

When the Marconi interests refused an outright sale of radio equipment to the U. S. Navy, Rear Admiral Henry B. Manney, Chief of the Bureau of Equipment, steadfastly refused to accept a system which would have been inadequate to our needs. He insisted upon providing the Navy with a communication system, wholly under its control, which could be expanded in response to requirements, and one which would not stifle our inventive genius.

In the following years the Navy paced the way to United States world leadership in electronics. The United States Navy's first radios, purchased in Europe before American manufacturers entered the field, were limited to ranges under a hundred miles, and covered such wide bands that carrying on two communications simultaneously was an impossibility. An urgent need for more sensitive and sharply tuned sets led naval engineers in the World War I period to champion vacuum tube research and development by domestic producers. Thus stimulated by naval backing, America's inventive genius turned out a reliable vacuum tube.

Originally vacuum tubes had a life expectancy of some 70 hours and cost fifty dollars each, limitations which made their widespread use economically unfeasible. However, shortly after World War I the Navy solicited bids on a 5000 hour tube costing no more than five dollars. The successful bidder met these revolutionary specifications, and so doing the Navy had sired a major contribution to the wildfire growth of commercial radio in this country, and set our electronics industry off to a booming start. Likewise, high voltage transmission line insulators, of a type now in world wide use, are a development growing out of the Navy's demand for high voltage insulators for shipboard and shore station antenna systems.

The Navy took the lead in airborne radio when in 1912 a naval aircraft, the first plane to carry a radio transmitter, communicated with a ground station at distances up to 16 miles. Four years later, the Navy's aircraft radio laboratory was established at Pensacola to concentrate on development of long range airborne radio equipment. By 1919, a naval pilot, using radio alone, was able to locate and fly to a battleship one hundred miles offshore.
The Navy was the first large user to adopt short wave for regular use, and the first to initiate organized research in high frequency communications. As early as 1925, the Naval Research Laboratory was able to correlate data explaining in detail the phenomena governing high frequency communications. Radar, the electronic wonder which provided our forces with such a tremendous advantage over the Japanese enemy in World War II, is a never-to-be-forgotten offshoot of the Navy's basic interest and research in high frequency.

At international as well as national communication conferences, the Navy has consistently played a leading role. The first chairman and the first technical adviser to the Federal Communications Commission were naval officers. International acceptance and adoption of the radio spectrum channeling system was a result of naval effort.

Many officers and men in the Navy had a hand in this swift progress. Two outstanding names that I might single out were Admirals S. S. Robison and A. J. Hepburn, both of whom shared the distinction of being Commanders-in-Chief, United States Fleet. Admiral Robison prepared a radio manual that through several revisions remained for years the standard naval text on the subject. Admiral Hepburn convinced naval authorities of the great need of research and development by qualified civilian radio engineers.

If one person were to be termed the father of radio in the United States Navy, it would be Rear Admiral Stanford C. Hooper. He was twice Fleet Radio Officer, thrice Head of the Radio Division, Bureau of Ships, and long time Director of Naval Communications. During his first tour as Fleet Radio Officer he helped to develop sound radio doctrine in the Fleet, established communication discipline, and improved reliability to a point where radio was accepted as a primary means of tactical signaling. After World War I, he championed the concept that American businessmen should combat foreign communications monopolies that endangered our national security. Largely through Admiral Hooper's ideas and energetic efforts, American corporations today play a major role in the field of international radio communications.

Admiral Hooper induced all important American patent owners to pool their patents. This was an inspired move which helped make American manufactured equipment the best in the world. To obtain increased power and ruggedness for naval use, he stimulated vacuum tube research and development. The result was the vacuum tube transmitter which has been the heart of modern radio communications. It was Admiral Hooper who, although initially opposed, later fostered the system of high frequency radio communication which proved indispensable in World War II. Thus, through his dedicated efforts, Admiral Hooper made many contributions of far-reaching importance to the effectiveness of the Navy and national security.

Many other individuals and elements of the Navy likewise contributed in important ways to the development of radio in the Navy. For example, the Naval Research Laboratory in Washington, D. C. did notable pioneer work in radio and especially high frequencies. It was during research in the use of higher frequencies that Dr. A. Hoyt Taylor discovered the phenomenon of radar, the electronic wonder that played such an important role in World War II victory.
These few names I have listed represent hundreds of thousands in and outside the Navy who by their dedicated service made possible the enormous strides in the fields of electronics and communications which have won world leadership for America. The electronics worker in the factory, the radio operator of a warship, and the communicators on distant stations do their part in defending America. Their work and their accomplishments are a part of this electronic history.

When the scope and size of naval operations are enlarged, so too are the problems of command and combat coordination. A World War II Fast Carrier Task Force was deployed over miles of ocean, whereas the modern Attack Carrier Task Force of the Atomic Age is spread over thousands of square miles with a commensurate increase in the complexity of tactical communications. Naval communications must of necessity keep abreast or ahead of the increased requirements generated by technological developments in ships, aircraft and weapons. The Navy's exacting demand for ever more versatility, ruggedness, reliability, and long operating life which must be built into its electronic systems have constantly stimulated invention and improved design, and will continue to set high standards for the industry.

It is a giant step from the spark-gap transmitter of a half century ago to the transistorized multiplex of today which can simultaneously transmit one hundred words a minute on each of four channels. The intricate electronic complexes which look into the sky, under the sea, and direct our guns, missiles, and aircraft are a far cry from the eyes of a sailor lookout. Yet we merely stand on the threshold of a new and exciting science.

Electronics has had a great past under the leadership of the United States Navy. This complex electronics science will have an even greater future in the Navy of tomorrow. The guided missile ships, space satellite radio recorders, and radio astronomy, indicate the course of events to come. In these events, the Navy will continue to play a vital role.
<table>
<thead>
<tr>
<th>NAME</th>
<th>DATE ASSUMED OFFICE</th>
<th>RANK</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Captain Richard P. Leary</td>
<td>Aug. 7, 1899</td>
<td>RAdm</td>
<td>'01</td>
</tr>
<tr>
<td>Commander Seaton Schroeder</td>
<td>Jul. 19, 1900</td>
<td>RAdm</td>
<td>'11</td>
</tr>
<tr>
<td>Commander W. Swift</td>
<td>Aug. 11, 1901</td>
<td>RAdm</td>
<td>'10</td>
</tr>
<tr>
<td>Commander Seaton Schroeder</td>
<td>Nov. 2, 1901</td>
<td>RAdm</td>
<td>'11</td>
</tr>
<tr>
<td>Commander W. E. Sewell</td>
<td>Feb. 6, 1903</td>
<td>Cdr</td>
<td>'04</td>
</tr>
<tr>
<td>Lieut. F. H. Schofield (acting)</td>
<td>Jan. 11, 1904</td>
<td>RAdm</td>
<td>'33</td>
</tr>
<tr>
<td>Lieut. Raymond Stone (acting)</td>
<td>Jan. 28, 1904</td>
<td>Cdr</td>
<td>'14</td>
</tr>
<tr>
<td>Commander G. L. Dyer</td>
<td>May 16, 1904</td>
<td>Com</td>
<td>'08</td>
</tr>
<tr>
<td>Lieut. Luke McNamees (acting)</td>
<td>Nov. 2, 1905</td>
<td>Adm</td>
<td>'34</td>
</tr>
<tr>
<td>Commander T. M. Potts</td>
<td>Mar. 2, 1906</td>
<td>Capt</td>
<td>'13</td>
</tr>
<tr>
<td>Captain Edward J. Dorn</td>
<td>Dec. 28, 1907</td>
<td>Capt</td>
<td>'05</td>
</tr>
<tr>
<td>Lieut. F. B. Freyer (acting)</td>
<td>Nov. 5, 1910</td>
<td>Capt</td>
<td>'37</td>
</tr>
<tr>
<td>Captain G. R. Salisbury</td>
<td>Jan. 12, 1911</td>
<td>Com</td>
<td>'12</td>
</tr>
<tr>
<td>Captain Robert E. Coontz</td>
<td>Apr. 30, 1912</td>
<td>Adm</td>
<td>'28</td>
</tr>
<tr>
<td>Comdr. A. W. Hinds (acting)</td>
<td>Sep. 23, 1913</td>
<td>RAdm</td>
<td>'27</td>
</tr>
<tr>
<td>Captain W. J. Maxwell</td>
<td>Mar. 28, 1914</td>
<td>Capt</td>
<td>'15</td>
</tr>
<tr>
<td>Lieut. Comdr. W. P. Cronan (acting)</td>
<td>May 9, 1916</td>
<td>Capt</td>
<td>'23</td>
</tr>
<tr>
<td>Captain Edward Simpson (acting)</td>
<td>May 9, 1916</td>
<td>RAdm</td>
<td>'24</td>
</tr>
<tr>
<td>Captain Roy C. Smith</td>
<td>May 30, 1916</td>
<td>Capt</td>
<td>'21</td>
</tr>
</tbody>
</table>

Deceased. (Continued on next page)
<table>
<thead>
<tr>
<th>Name</th>
<th>Date Assumed Office</th>
<th>Rank</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lt. Comdr. W. A. Hodgman (acting)</td>
<td>Nov. 22, 1919</td>
<td>Capt</td>
<td>'21</td>
</tr>
<tr>
<td>Captain William W. Gilmer</td>
<td>Dec. 21, 1919</td>
<td>Capt</td>
<td>'21</td>
</tr>
<tr>
<td>Lt. Comdr. James S. Spore (acting)</td>
<td>Feb. 27, 1921</td>
<td>Cdr</td>
<td>'35</td>
</tr>
<tr>
<td>Captain Ivan C. Wettengel</td>
<td>Apr. 15, 1921</td>
<td>Capt</td>
<td>'28</td>
</tr>
<tr>
<td>Commander John P. Miller (acting)</td>
<td>Nov. 8, 1922</td>
<td>Cdr</td>
<td>'34</td>
</tr>
<tr>
<td>Captain Adelbert Althouse</td>
<td>Dec. 14, 1922</td>
<td>Capt</td>
<td>'25</td>
</tr>
<tr>
<td>Captain H. B. Price</td>
<td>Aug. 4, 1923</td>
<td>Capt</td>
<td>'41</td>
</tr>
<tr>
<td>Commander A. W. Brown (acting)</td>
<td>Aug. 26, 1924</td>
<td>Capt</td>
<td>'38</td>
</tr>
<tr>
<td>Captain H. B. Price</td>
<td>Oct. 14, 1924</td>
<td>Capt</td>
<td>'41</td>
</tr>
<tr>
<td>Captain L. S. Shapley</td>
<td>Apr. 7, 1926</td>
<td>Capt</td>
<td>'46</td>
</tr>
<tr>
<td>Captain Willis W. Bradley Jr.</td>
<td>Jun. 11, 1929</td>
<td>Capt</td>
<td>'46</td>
</tr>
<tr>
<td>Captain Edmund S. Root</td>
<td>May 15, 1931</td>
<td>Capt</td>
<td>'40 &amp; '56</td>
</tr>
<tr>
<td>Captain George A. Alexander</td>
<td>Jun. 21, 1933</td>
<td>Capt</td>
<td>'41 &amp; '46</td>
</tr>
<tr>
<td>Commander Benjamin V. McCandlish</td>
<td>Mar. 27, 1936</td>
<td>Com</td>
<td>'46</td>
</tr>
<tr>
<td>Commander James T. Alexander</td>
<td>Feb. 6, 1938</td>
<td>Capt</td>
<td>'46</td>
</tr>
<tr>
<td>Captain George J. McMillin</td>
<td>Apr. 20, 1940</td>
<td>RAdm</td>
<td>'49</td>
</tr>
<tr>
<td>Fleet Admiral Chester W. Nimitz (Military Governor of Guam)</td>
<td>Aug. 12, 1944</td>
<td>FAdm</td>
<td>'66 (Died on active duty)</td>
</tr>
<tr>
<td>Rear Admiral Charles A. Pownall</td>
<td>May 30, 1946</td>
<td>VAdm</td>
<td>'49</td>
</tr>
</tbody>
</table>

Deceased. (The administration of the Island of Guam was transferred from the Secretary of the Navy to the Secretary of the Interior effective on July 1, 1950.)
The lists of personnel in this appendix were obtained by the historian of the Old Timer Communicators (OTC), John W. Trott, from Christmas cards and other documents provided by members, and others. Some lists were compiled strictly from names recalled by members. Others were provided with group photographs included in the appendix.

The historian has researched the names to include first names or initials, Bellevue, San Diego, WORES and Electronic Maintenance schools class numbers, the ranks or rates at which the men retired from service and dates, their current status (living or deceased, when known) and any other pertinent data that would be of interest to OTC members and other readers.

Members and others who happen to read this history can help to augment these lists by searching their scrapbooks and their memories for any records, including Christmas cards, of officers and men who served in communications at any Naval shore communication station or any Naval ship.

Readers are also invited to contribute (or loan) additional material for these histories including, but not limited to, personal recollections (sea stories), with dates, of their experiences in Naval communications. Of special interest are lists and photographs of personnel, photographs of early equipments, buildings, towers, antenna systems, etc. If possible, identification and dates of photo subjects should accompany each photo.

Please send such material to the Old Timer Communicators historian, John W. Trott, 4512 Pescadero Avenue, San Diego, California, 92107. Indicate which items are to be returned to you.

APPENDIX C-1
<table>
<thead>
<tr>
<th>RNS</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
<th>RNS</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADKINS, N W</td>
<td>CEM</td>
<td></td>
<td></td>
<td>JOHNSTON, H F</td>
<td>Y6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BARCINAS, I</td>
<td>EM2</td>
<td></td>
<td></td>
<td>KILLY, Chester C</td>
<td>RM1</td>
<td>RMC '44</td>
</tr>
<tr>
<td>15</td>
<td>BULLARD, R K</td>
<td>RM2</td>
<td></td>
<td></td>
<td>KIRKPATRICK, C B</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BUSH, Frederick E</td>
<td>RM2</td>
<td>Lt '50</td>
<td></td>
<td>LASKO, E E</td>
<td>EM3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAINGAT, L L</td>
<td>RM3</td>
<td></td>
<td></td>
<td>MANIBUSAN, J Q</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLEMENTS, James L</td>
<td>CM1</td>
<td>CWO2'48</td>
<td></td>
<td>McMATH, Alexander M</td>
<td>RE</td>
<td>Ens '40</td>
</tr>
<tr>
<td></td>
<td>COHEN, Benjamin</td>
<td>RM1</td>
<td>de RCA</td>
<td></td>
<td>MORRIS H A</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COLEY, Alton L</td>
<td>RM2</td>
<td>RMC '??</td>
<td></td>
<td>MULLEN, E J</td>
<td>RM1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMPTON, H E</td>
<td>MM1</td>
<td></td>
<td></td>
<td>SCHROEDER, W F</td>
<td>EM3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COX, E J</td>
<td>CRM</td>
<td></td>
<td></td>
<td>SEMMENS, G M</td>
<td>RML</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRYMES, P E</td>
<td>EM3</td>
<td></td>
<td></td>
<td>SIMKINS, J L</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DAVID, Pedro</td>
<td>RM1</td>
<td>RML '??</td>
<td></td>
<td>SIMPSON, Harry L</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOUGLAS, C F</td>
<td>RM2</td>
<td></td>
<td></td>
<td>SINK, R E</td>
<td>RM3</td>
<td></td>
</tr>
<tr>
<td>SD 10</td>
<td>ESTES, B E</td>
<td>RM2</td>
<td></td>
<td></td>
<td>TAFT, Philip H</td>
<td>Lt</td>
<td>Cdr '43</td>
</tr>
<tr>
<td></td>
<td>ETTER, Carl H</td>
<td>RM1</td>
<td>Lt '50</td>
<td></td>
<td>TARDY, L H</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GOGO, V</td>
<td>SC2</td>
<td></td>
<td></td>
<td>TAYLOR, Carroll W</td>
<td>RM2</td>
<td>CWO2'50</td>
</tr>
<tr>
<td>SD 3</td>
<td>HAMILTON, Frank Lin H</td>
<td>RM1</td>
<td>RMC '??</td>
<td></td>
<td>TAYLOR, G E</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HUSTED, Casper H</td>
<td>CGun</td>
<td>CWO4'40</td>
<td></td>
<td>THOMPSON, A L</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WILKES, Frank B</td>
<td>CT</td>
<td>CWO2'45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WOODSON, Russell M</td>
<td>CRM</td>
<td>CWO2'45</td>
</tr>
</tbody>
</table>

Deceased.

MEMBER OTC SoCal and/or NorCal 1974 or earlier.

From a Masquerade Dance Programme dated 20 Jun furnished by Jolly. San Diego & Bellevue class numbers, if known, added for cross reference. Any errors in lst names are those made during research.
**NFN RADIO STATION GUAM -- 1927-1929**  
*(Agana, Libugon, GOLD STAR)*

<table>
<thead>
<tr>
<th>RMS Cl#</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
<th>RMS Cl#</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ARCHER, Francis O</td>
<td>RM2</td>
<td>RMC '49</td>
<td>ILYON, Malcolm W</td>
<td>RML</td>
<td>LCdr '48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BILLEHUS, Guy O</td>
<td>CRM</td>
<td>Lt '14</td>
<td>or</td>
<td>LYONS, Felix</td>
<td>RML</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BOUQUETTE, Arthur</td>
<td>CRM</td>
<td>Lt '14</td>
<td></td>
<td>MANKIN, Noble Lee</td>
<td>RML</td>
<td>Lt '51</td>
</tr>
<tr>
<td></td>
<td>(from 1-28)</td>
<td></td>
<td></td>
<td>29</td>
<td>McMASTIN, Francis J</td>
<td>RML</td>
<td>Ltjg '55</td>
</tr>
<tr>
<td></td>
<td>BOWMAN, Arthur</td>
<td>CRE</td>
<td>Lt '14</td>
<td>MILLER,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(not MK)</td>
<td></td>
<td></td>
<td>MUSSER, Francis G</td>
<td>RM3/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAINGAT, L L</td>
<td>RM2</td>
<td></td>
<td>ORANGE, Emmett S</td>
<td>RM3/2</td>
<td>LCdr '56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CARLSON,</td>
<td>CRM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COLOY, Burton E</td>
<td>RML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DUNSON, Bernarr A</td>
<td>RM3/2</td>
<td>10-8-Ltjg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FICKAS, Wilbert R</td>
<td>CRM</td>
<td>Ltjg '50</td>
<td>PERKINS,</td>
<td>RM3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>FOLLISN, Haakon</td>
<td>RM3/2</td>
<td></td>
<td>POWELL,</td>
<td>CRM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FUNKHOUSE,</td>
<td>RML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GOLDSKSTEIN, Joseph</td>
<td>CRM</td>
<td>CWO2 '46</td>
<td>SALENITX,</td>
<td>RML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>GOODWIN, Keith E</td>
<td>RML</td>
<td>LCdr '53</td>
<td>SAMPSON, Courtney H</td>
<td>RM3</td>
<td>Cdr '58</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GUEST, James L</td>
<td>RML</td>
<td>Lt '49</td>
<td>SCHENBERG, Fred</td>
<td>RM3/2</td>
<td>Lt '50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GRANDE,</td>
<td></td>
<td></td>
<td>SCHROEDER, W F</td>
<td>CEM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HILL,</td>
<td>CRM</td>
<td></td>
<td>SHARKEY,</td>
<td>RM3/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>HIPPS, Thomas B</td>
<td>RM2</td>
<td></td>
<td>SNOW,</td>
<td>(not JW)</td>
<td>RM3</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>HOLLIS,</td>
<td>CRM</td>
<td></td>
<td>SWINT, Roger J</td>
<td>(to 10-27)</td>
<td>CEM</td>
<td>LCdr '45</td>
</tr>
<tr>
<td>2</td>
<td>HOOK, William F</td>
<td>RM2</td>
<td>Ltjg '56</td>
<td>TWENDE,</td>
<td>RML</td>
<td>RM3/2 '??</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LANGE,</td>
<td>RM3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LONG, James T</td>
<td>CRM</td>
<td>LCdr '47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Deceased.*

MEMBER OTC SoCal and/or NorCal 1986 or earlier.

ADDRESS on hand in 1986.

From names recalled by Hook. Bellevue & San Diego class numbers, if known, added for cross reference. Any errors in first names are those made during research.

APPENDIX C-3
Left to right:

Top Row:  Goldstein  Vandenburg  McMartin

Sitting:  Dennison  Follien  Hook  Lloyd  Twente

(See Appendix C-3)
Left to right - standing:

Wigle
Edens
Benjamin
Wood
Hoover
Jensen
Jones

CRM
CRM
RM2
CRM
RM1
RM2
RM1

Left to right - kneeling:

Marks
Gelineau
Condon
Long
Burnett

RM2
RM2
RM1
RM1
RM1

(See APPENDIX C-6)

APPENDIX C-5
<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
<th>Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEMJAMIN, Ivan S</td>
<td>RM2</td>
<td>Lcdr '56</td>
<td>JENSEN, Carl A</td>
<td>RM2</td>
<td>Lcdr '56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BURNETT, Sidney A</td>
<td>RM1</td>
<td>CW2 '57</td>
<td>JONES, Orvill Lester</td>
<td>RM1</td>
<td>Lt '58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONGDON, Carl L</td>
<td>RM1</td>
<td>Lt '47</td>
<td>LONG, Victor L</td>
<td>RM1</td>
<td>WOl '51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDENS, William J</td>
<td>CRM</td>
<td>Lcdr '53</td>
<td>MARKS, E H</td>
<td>RM2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GELINEAU, John H</td>
<td>RM2</td>
<td>CW2 '59</td>
<td>WIGLE, Daryl W</td>
<td>CRM</td>
<td>Lcdr '50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOOVER, Thomas G</td>
<td>RM1</td>
<td>Lt '50</td>
<td>WOOD, Muriel D</td>
<td>CRM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Deceased.**

**MEMBER OTC SoCal and/or NorCal 1986 or earlier.**

**ADDRESS on hand in 1986.**

From captioned picture belonging to Alvey, machine copy in OTC archives. Bellevue & Electronics Maintenance class numbers, if known, added for cross reference. Any errors in first names are those made during research. (Slightly different shot on p. 29 of 1971 OTR Muster List from picture belonging to Jensen.)
### APPENDIX C-7

#### NPN RADIO STATION GUAM -- Dec 1934

(Perhaps including PENGUIN)

<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>R/B</th>
<th>Retired</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALVEY, Anthony G</td>
<td>RM2</td>
<td>RMC '48</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CARTER, Arthur B</td>
<td>RML</td>
<td>Lt '53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>EKELUND, Kenneth O</td>
<td></td>
<td>Lt Capt '53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD7</td>
<td>FOSTER, James R</td>
<td>CRM</td>
<td>Ltjg '50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HASKINS, E</td>
<td>RM2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HEISTAND, Mark</td>
<td>CRM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HEISTAND, Mark</td>
<td>CRM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Deceased.

MEMBER OTC SoCal 1986 or earlier.

ADDRESS on hand in 1986.

From "The Guam Recorder" of Jan 1935 (except for DCO/RMO Ekelund) in column "Social & Other Doings." San Diego & Bellevue class numbers, if known, added for cross reference. Any errors in 1st names are those made during research.

A.G.ALVEY RM2C & A.C.PRONIER RM1C.
COMMUNICATION OFFICE, AGANA GUAM.

Photo from Anthony G. Alvey
<table>
<thead>
<tr>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALVEY, Anthony G</td>
<td>RM2</td>
<td>RMC '48</td>
<td>MANLEY, Harold W</td>
<td>RM2</td>
<td>RMC '48</td>
</tr>
<tr>
<td>ANDERSON, Carl Albert</td>
<td>EML</td>
<td>CWO2 '51</td>
<td>MESSICK, John E</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td>CAGUIOA, Leon</td>
<td>RM2</td>
<td></td>
<td>MIDDLETON,</td>
<td>RM1</td>
<td></td>
</tr>
<tr>
<td>CARTER, Arthur B</td>
<td>RM1</td>
<td>Lt '53</td>
<td>MIMS, William Foy</td>
<td>Y1</td>
<td>CWO2 '49</td>
</tr>
<tr>
<td>EKELUND, Kenneth O</td>
<td>Lt Capt '53</td>
<td></td>
<td>RROLEY, John E</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td>HEISTAND, Mark</td>
<td>CRM</td>
<td></td>
<td>STONE, Charlie G</td>
<td>RM1</td>
<td>CWO2 '53</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td>VanNICE, William W</td>
<td>RM3</td>
<td>Ltjg '63</td>
</tr>
<tr>
<td>HEISTAND, Mark</td>
<td>CRM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Deceased.

MEMBER OTC SoCal and/or NorCal 1986 or earlier.

Address on hand in 1986.

From captioned picture belonging to Alvey, machine copy in OTC archives. Bellevue class numbers, if known, added for cross reference. Any errors in first names are those made during research.
Left to right:

Seated:

Capt. George A. Alexander, Governor of Guam.
Lt. Kenneth O. Ekelund, Communication Officer.

2nd Row:
Heistand
Stone
Mims
Messick
Anderson
Caguia

3rd Row:
Carter
Alvey
VanNice
Manley
Middleton
Rolley

Photo from Harold W. Manley and Anthony G. Alvey
<table>
<thead>
<tr>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALVEY, Anthony G</td>
<td>RM2</td>
<td>RMC '48</td>
<td>MANLEY, Harold W</td>
<td>RM2</td>
<td>RMC '48</td>
</tr>
<tr>
<td>ANDERSON, Carl Albert</td>
<td>EML</td>
<td>CWO2 '51</td>
<td>MASKI, W</td>
<td>EML</td>
<td></td>
</tr>
<tr>
<td>CHITTENDEN, John W</td>
<td>LtJG</td>
<td>LCdr '45</td>
<td>MESSICK, John E</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td>FOSTER, George A</td>
<td>RM1</td>
<td>RMC '46</td>
<td>MANLEY, Harold W</td>
<td>RM2</td>
<td>RMC '48</td>
</tr>
<tr>
<td>THIZNY, John J</td>
<td>RM2</td>
<td>RMC '??</td>
<td>RHODES, Clarence G</td>
<td>RML</td>
<td>Lt '56</td>
</tr>
<tr>
<td>JENKINS, Alvin</td>
<td>RM1</td>
<td></td>
<td>SPICER, C R</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td>LIVINGSTON, Leland A</td>
<td>RM2</td>
<td>CWO2 '52</td>
<td>TUCKER, Raymond C</td>
<td>RM2</td>
<td>RMC '46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SAMMS, Clarence B</td>
<td>CRM</td>
<td>LtJg '47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WHITNEY, M S</td>
<td>RML</td>
<td></td>
</tr>
</tbody>
</table>

### Notes

- **Deceased.**
- **MEMBER** OTC SoCal and/or NorCal 1986 or earlier.
- **ADDRESS** on hand in 1986.

From Xmas card donated to OTC archives by Arnold & copy of Manley's card. Bellevue class numbers, if known, added for cross reference. Any errors in first names are those made during research.
<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BENJAMIN, Ivan S</td>
<td>RM1</td>
<td>Lcdr '56</td>
</tr>
<tr>
<td></td>
<td>BILLISSELL, Chester E</td>
<td>RM3</td>
<td>CTC '??</td>
</tr>
<tr>
<td></td>
<td>CYE, Hilary E</td>
<td>RM1</td>
<td>CW04 '57</td>
</tr>
<tr>
<td></td>
<td>DANIELLS, Charles E</td>
<td>CRM</td>
<td>Lcdr '51</td>
</tr>
<tr>
<td></td>
<td>DETTERICH, Clarence A</td>
<td>RM2</td>
<td>Lcdr '59</td>
</tr>
<tr>
<td></td>
<td>DONNER, Robert L</td>
<td>RM2</td>
<td>Cdr '62</td>
</tr>
<tr>
<td>EM27</td>
<td>JENSEN, Carl A</td>
<td>RM1</td>
<td>Lcdr '56</td>
</tr>
<tr>
<td></td>
<td>JOHNSON, Walter H</td>
<td>RM2</td>
<td>Lcdr '59</td>
</tr>
<tr>
<td></td>
<td>JONES, Orvill Lester</td>
<td>RM1</td>
<td>Lt '58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KELLY, Edward N</td>
<td>RM2</td>
<td>CTC '??</td>
</tr>
<tr>
<td></td>
<td>OKINS, Elliott E</td>
<td>RM3</td>
<td>Lcdr '60</td>
</tr>
<tr>
<td></td>
<td>POLISH, &quot;Baldy&quot;</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROOP, John H</td>
<td>RM1</td>
<td>CW02 '57</td>
</tr>
<tr>
<td></td>
<td>THOMSON, Fred R</td>
<td>RM3</td>
<td>Cdr '65</td>
</tr>
<tr>
<td></td>
<td>WHITTEN, Rodney L</td>
<td>RM2</td>
<td>Ltjg '47</td>
</tr>
</tbody>
</table>

Deceased.
MEMBER OTC SoCal and/or NorCal 1986 or earlier.
ADDRESS on hand in 1986.

<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>ALBORN, Andrew J</td>
<td>RM2</td>
<td>RMC '??</td>
</tr>
<tr>
<td>34</td>
<td>ALLEN, Burrell C Jr</td>
<td>Lt</td>
<td>RAdm'59</td>
</tr>
<tr>
<td>34</td>
<td>BLACKWELL, Thomas E</td>
<td>RM2</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>CARTER, Arthur B</td>
<td>CRM</td>
<td>Lt '53</td>
</tr>
<tr>
<td>19</td>
<td>HIZNY, John J</td>
<td>RM2</td>
<td>RMC '??</td>
</tr>
<tr>
<td>30</td>
<td>LIVINGSTON, Leland A</td>
<td>RML</td>
<td>CWO2'52</td>
</tr>
<tr>
<td></td>
<td>LONG, B F</td>
<td>CT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LYONS, Jesse O</td>
<td>RML</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>MAXWELL, C C</td>
<td>RM2</td>
<td>LCdr'56</td>
</tr>
<tr>
<td>34</td>
<td>McLANE, Albert R</td>
<td>RM1</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>NAGLE, G J</td>
<td>EML</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>OLSON, Archie L</td>
<td>RM1</td>
<td>CWO4'58</td>
</tr>
<tr>
<td>22</td>
<td>PINKHAM, Earle W</td>
<td>CRM</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>RHODES, Clarence G</td>
<td>RM1</td>
<td>Lt '56</td>
</tr>
<tr>
<td>16</td>
<td>SMITH, Loyd Thomas</td>
<td>RM2</td>
<td>W01 '62</td>
</tr>
<tr>
<td>31</td>
<td>STORER, Max C</td>
<td>RML</td>
<td>E0-31-41</td>
</tr>
<tr>
<td></td>
<td>WINTERS, Harold M</td>
<td>RM2</td>
<td>LCdr'59</td>
</tr>
</tbody>
</table>

Deceased.

MEMBER OTC SoCal and/or NorCal 1986 or earlier.

ADDRESS on hand in 1986.

From Xmas card donated to OTC archives by Mrs. Cormman. Bellevue class numbers, if known, added for cross reference. Any errors in first names are those made during research.
RMS
Cl# Name R/R Retired
ALLEN, Burrell C Jr Lt RAdm'59
BERG, N C RM1
BLACKWELL, Thomas E RM2
13 CARTER, Arthur B CRM Lt '53
CRAMER, Clinton J RM2
LONG, B F CI
34 McLANE, Albert R RM1 LCdr'56

RMS
Cl# Name Rate Retired
FARMER, Alan W RM1 LCdr'57
PINKHAM, Earle W CRM
SAWYER, Carl E RM1 Civ'65
TWEED, George R RM1 Lt '51
WASKEY, G H RM2
WHITE, C L RM1
WINGFIELD, William H EM1 CW02'58
WINTERS, Harold M RM2 LCdr'59
YOUNG, Edmund C RM2 Lt '52

Deceased.
MEMBER OTC SoCal 1986 or earlier.
ADDRESS on hand in 1986.

From Xmas card donated to OTC archives by Winters. Bellevue & WORES class numbers, if known, added for cross reference. Any errors in first names are those made during research.
<table>
<thead>
<tr>
<th>RMS Cl#</th>
<th>Name</th>
<th>R/R</th>
<th>Retired</th>
<th>RMS Cl#</th>
<th>Name</th>
<th>Rate</th>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>BARNUM, Donald W</td>
<td>CRM</td>
<td>LCdr'58</td>
<td>15</td>
<td>MILLER, Clifford L Jr</td>
<td>RM1</td>
<td>LCdr'60</td>
</tr>
<tr>
<td></td>
<td>FILAHA, Joseph Henry</td>
<td>CT</td>
<td></td>
<td>EM30</td>
<td>MUSSHELWHITE, Otis W</td>
<td>RM1</td>
<td>Lt '57</td>
</tr>
<tr>
<td></td>
<td>CRAMER, Clinton J</td>
<td>RM1</td>
<td></td>
<td>11</td>
<td>MIERS, Hugh H</td>
<td>CRM</td>
<td>Lt '52</td>
</tr>
<tr>
<td></td>
<td>DILLARD, Edward J</td>
<td>RM2</td>
<td>CTC '??</td>
<td>11</td>
<td>PARMETER, Alan W</td>
<td>RM1</td>
<td>LCdr'57</td>
</tr>
<tr>
<td></td>
<td>GELLIS, Robert R</td>
<td>RM1</td>
<td>LCdr'62</td>
<td></td>
<td>RATHBUN, Lorenzo E</td>
<td>RM2</td>
<td>CW03'64</td>
</tr>
<tr>
<td></td>
<td>EPPERSON, Robert B</td>
<td>RM2</td>
<td>CW04'63</td>
<td></td>
<td>SMITH, Frederick Ferguson</td>
<td>RM1</td>
<td>CW04'60</td>
</tr>
<tr>
<td></td>
<td>PAULKNER, Stuart T</td>
<td>RM2</td>
<td>Cdr '71</td>
<td></td>
<td>SMITH, Lloyd Thomas</td>
<td>RM1</td>
<td>W01 '62</td>
</tr>
<tr>
<td></td>
<td>GORDI, Tom W</td>
<td>RM1</td>
<td>Lt '57</td>
<td></td>
<td>SMITH, Markle Tobias</td>
<td>RM1</td>
<td>Cdr '57</td>
</tr>
<tr>
<td></td>
<td>JOSLIN, Harold E</td>
<td>RM2</td>
<td>Capt '7?</td>
<td>W21</td>
<td>TWEED, George R</td>
<td>RM1</td>
<td>Lt '51</td>
</tr>
<tr>
<td></td>
<td>KELLOGG, Harvey G</td>
<td>RM1</td>
<td>POW</td>
<td></td>
<td>TYSON, Alfred J</td>
<td>RM1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MADSEN, Elwood C (2)</td>
<td>Lt</td>
<td>Capt '55</td>
<td></td>
<td>YAHLONSKY, Adolphe</td>
<td>Y1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>McCUNE, Don L</td>
<td>RM2</td>
<td></td>
<td>18</td>
<td>YOUNG, Joe R</td>
<td>CRM</td>
<td>Lt '56</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deceased.</th>
<th>MEMEER</th>
<th>OTC SoCal and/or NorCal</th>
<th>1986 or earlier.</th>
<th>ADDRESS</th>
<th>on hand in 1986.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Designated Naval Aviator.</td>
<td>From &quot;Our Navy&quot; Mid-Mar 1942 p. 42 and 1 Apr p. 3, &quot;Robinson Crusoe, USN&quot; by Tweed, and names recalled by Joe Young. Bellevue, WORES &amp; Electronics Maintenance class numbers, if known, added for cross reference.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX C-14
(Photo from Mr. and Mrs. Carl J. Williams)

APPENDIX D-1
Fixed emplacement cannon for the defense of Agana Harbor.
(photo from Mr. and Mrs. Carl J. Williams)

Coconut Crab - Guam
(photo from Harold W. Manley)

Old Spanish Fort - Umatac Bay
(photo from Mr. and Mrs. Carl J. Williams)
Going to town - driving a cow. Guam 1935.
(Photo from Mr. and Mrs. Carl J. Williams)

Typical Guam scene - 1934.
(Photo from Harold W. Manley)

APPENDIX D-3
Chamorro farmer in Guam plowing with his carabao - 1935.
(Photo from Mr. and Mrs. Carl J. Williams)

Native oven - Guam
(Photo from Mr. and Mrs. Carl J. Williams)

Faniji or "flying fox"
(Photo from Harold W. Manley)
Apra Harbor - Guam. Ships anchor here. Small boats are used to offload passengers and bring them to shore.

A street in Agana going toward Piti. Guam 1935.

(Photos from Mr. and Mrs. Carl J. Williams)
"Broadway" Agana, Guam 1935. Showing the theater, Butler's Coca-Cola bottling plant and local shops.

City jail - Agana, Guam, 1935.

(Photos from Mr. and Mrs. Carl J. Williams)
Chamorro ladies in their native dress
Agana, Guam - 1935

Monument to Magellan, Umatac, Guam 1936.

(Photos from Mr. and Mrs. Carl J. Williams)
Main department store, Agana, Guam 1935. The owner was a Japanese woman who was suspected of passing to Japan intelligence information about Navy installations on Guam.

(Photos from Mr. and Mrs. Carl J. Williams)

Plaza de Espana, Agana, Guam 1935. All Government buildings surrounded this square. Band stand is in center. Governor's Palace is not shown but is to the right. Hospital is back of the church. Officers' quarters are to the left on the same street with the bank and jail.

(Photos from Mr. and Mrs. Carl J. Williams)
U. S. Naval Hospital, Guam 1934.

Pan American Airways landing, Guam 1936

(Photos from Mr. and Mrs. Carl J. Williams)
Governor George A. Alexander greets Captain Rod Sullivan and crew of Pan American PHILIPPINE CLIPPER on a survey flight across the Pacific - October 13, 1935.

Photo from Anthony G. Alvey


(Photo from Mr. and Mrs. Carl J. Williams)

APPENDIX D-11
Route of the "China Clipper"

Picture of the China Clipper a few minutes after "take-off" flying over the then-unfinished Golden Gate Bridge enroute the Orient on its epic flight.

Log of the CHINA CLIPPER flight 1935:

Alameda to Honolulu - November 22nd & 23rd, 1935.
Midway to Wake - November 25th & 26th, 1935.
Wake Island to Guam - November 26th & 27th, 1935.
Guam to Manila - November 28th & 29th, 1935.

Return trip:

Manila to Guam - December 1st & 2nd, 1935.
Guam to Wake - December 2nd & 3rd, 1935.
Wake to Midway - December 3rd & 4th, 1935.
Midway to Honolulu - December 4th & 5th, 1935.
Honolulu to Alameda - December 6th, 1935.

(from SPARKS JOURNAL, Society of Wireless Pioneers)
Historic Date – November 23, 1935. The China Clipper arriving at Pearl Harbor.


(Photos from SPARKS JOURNAL – Society of Wireless Pioneers)

APPENDIX D-13
Governor George A. Alexander throwing out the first ball - Bradley Park - Guam, 1935.

Champs - 1934.
Champs - 1935!

(Photos from Harold W. Manley)

APPENDIX D-14
COMDR. E.V. MCCANDLISH RELIEVING CAPTAIN G.A. ALEXANDER AS GOVERNOR OF GUAM, MARCH 1935.

(Photo from Anthony G. Alvey)

Naval Station Band - Guam, 1935.
(Carl J. Williams 2nd from right, back row)

(Photo from Mr. and Mrs. Carl J. Williams)

APPENDIX D-15
Pan American Airways Hotel - Guam
before the 1940 hurricane.

Pan American Airways Hotel - Guam
after the 1940 hurricane

Photos from Carl E. Sawyer

APPENDIX D-17
Pan American Airways Hotel - Guam after the November 1940 hurricane

American occupied homes - Guam November 2, 1940.

Photos from Carl E. Sawyer

APPENDIX D-18
Part of the Pan American Airways System
after the 1940 hurricane in Guam

Native part of Piti, Guam
after the 1940 hurricane

Photos from Carl E. Sawyer

APPENDIX D-19
Pan American Airways Hanger - Guam
after the 1940 hurricane

MAIN Street, Agana, Guam - 1939
(that is my 1936 Chevy - left corner)

Photos from Carl E. Sawyer
### ZONE TIME

<table>
<thead>
<tr>
<th>Time (24 hr)</th>
<th>Washington Zone Plus 3</th>
<th>Frisco Zone Plus 8</th>
<th>Honolulu Zone Plus 10</th>
<th>Guam Zone Minus 10</th>
<th>Cavite Zone Minus 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midnight 3rd - 4th</td>
<td>21:00</td>
<td>3d</td>
<td>18:30</td>
<td>3d</td>
<td>15:00</td>
</tr>
<tr>
<td>1:00</td>
<td>4th</td>
<td>22:00</td>
<td>3d</td>
<td>19:30</td>
<td>3d</td>
</tr>
<tr>
<td>2:00</td>
<td>4th</td>
<td>23:00</td>
<td>3d</td>
<td>20:30</td>
<td>3d</td>
</tr>
<tr>
<td>3:00</td>
<td>4th</td>
<td>Midnight 3d - 4th</td>
<td>21:30</td>
<td>3d</td>
<td>18:00</td>
</tr>
<tr>
<td>4:00</td>
<td>4th</td>
<td>1:00</td>
<td>4th</td>
<td>22:30</td>
<td>3d</td>
</tr>
<tr>
<td>5:00</td>
<td>4th</td>
<td>2:00</td>
<td>4th</td>
<td>23:30</td>
<td>3d</td>
</tr>
<tr>
<td>6:00</td>
<td>4th</td>
<td>3:00</td>
<td>4th</td>
<td>0:30</td>
<td>4th</td>
</tr>
<tr>
<td>7:00</td>
<td>4th</td>
<td>4:00</td>
<td>4th</td>
<td>1:30</td>
<td>4th</td>
</tr>
<tr>
<td>8:00</td>
<td>4th</td>
<td>5:00</td>
<td>4th</td>
<td>2:30</td>
<td>4th</td>
</tr>
<tr>
<td>9:00</td>
<td>4th</td>
<td>6:00</td>
<td>4th</td>
<td>3:30</td>
<td>4th</td>
</tr>
<tr>
<td>10:00</td>
<td>4th</td>
<td>7:00</td>
<td>4th</td>
<td>4:30</td>
<td>4th</td>
</tr>
<tr>
<td>11:00</td>
<td>4th</td>
<td>8:00</td>
<td>4th</td>
<td>5:30</td>
<td>4th</td>
</tr>
<tr>
<td>12:00</td>
<td>4th</td>
<td>9:00</td>
<td>4th</td>
<td>6:30</td>
<td>4th</td>
</tr>
<tr>
<td>13:00</td>
<td>4th</td>
<td>10:00</td>
<td>4th</td>
<td>7:30</td>
<td>4th</td>
</tr>
<tr>
<td>14:00</td>
<td>4th</td>
<td>11:00</td>
<td>4th</td>
<td>8:30</td>
<td>4th</td>
</tr>
<tr>
<td>15:00</td>
<td>4th</td>
<td>Noon 4th</td>
<td>9:30</td>
<td>4th</td>
<td>6:00</td>
</tr>
<tr>
<td>16:00</td>
<td>4th</td>
<td>12:00</td>
<td>4th</td>
<td>10:30</td>
<td>4th</td>
</tr>
<tr>
<td>17:00</td>
<td>4th</td>
<td>13:00</td>
<td>4th</td>
<td>11:30</td>
<td>4th</td>
</tr>
<tr>
<td>18:00</td>
<td>4th</td>
<td>14:00</td>
<td>4th</td>
<td>12:30</td>
<td>4th</td>
</tr>
<tr>
<td>19:00</td>
<td>4th</td>
<td>15:00</td>
<td>4th</td>
<td>13:30</td>
<td>4th</td>
</tr>
<tr>
<td>20:00</td>
<td>4th</td>
<td>16:00</td>
<td>4th</td>
<td>14:30</td>
<td>4th</td>
</tr>
<tr>
<td>21:00</td>
<td>4th</td>
<td>17:00</td>
<td>4th</td>
<td>15:30</td>
<td>4th</td>
</tr>
<tr>
<td>22:00</td>
<td>4th</td>
<td>18:00</td>
<td>4th</td>
<td>16:30</td>
<td>4th</td>
</tr>
<tr>
<td>23:00</td>
<td>4th</td>
<td>19:00</td>
<td>4th</td>
<td>17:30</td>
<td>4th</td>
</tr>
<tr>
<td>24:Mid. 4th - 5th</td>
<td>21:00</td>
<td>4th</td>
<td>18:30</td>
<td>4th</td>
<td>15:00</td>
</tr>
</tbody>
</table>

Chart provided by William F. Hook

Radio receivers - USS GOLDSTAR
Station ship - Guam - 1938
Photo from Carl E. Sawyer

APPENDIX D-21
Left to right:
Robinson
Phillips
Haskins
Manley
Just arrived Guam - 1934.

(Photos from Harold W. Manley)
Photocopies and identifications, provided by J. R. Young, of some of the American Prisoners of War at Zentsuji, Japan.

Appendix E-1
Photocopies and identifications, provided by J. R. Young, of some of the American Prisoners of War at Zentsuji, Japan.

APPENDIX E-2
Photocopies and identifications, provided by J. R. Young, of some of the American Prisoners of War at Zentsuji, Japan.
Photocopies and identifications, provided by J. R. Young, of some of the American Prisoners of War at Zentsuji, Japan.
Editor's Note: Guam Diary I to III appeared in the Recorder. Guam Diary IV was mailed to the Recorder on the plane which left Pearl Harbor on December 5, 1941. That plane did not get beyond Wake, and Diary IV will never be published.

Diary V, presented herewith, tells how war came to Guam. Obviously it is not my story but that of the nurses, Miss Yetter in particular.

War began in Guam on December 6 (December 5 Pearl Harbor time). On that date currency and codes were destroyed, presumably on the orders from the Commander in Chief, Asiatic Fleet. A part of the Guam plan of destruction was carried out on the same day, but other parts were held in abeyance. Some parts were never carried out, for reasons that were doubtless good and sufficient. There wasn't much, really, that could be done.

On December 8, 1941, at 8 a.m. local time, the news of Pearl Harbor was received in Guam. Within an hour the first wave of six Japanese bombers flew over the Island. A little later another group of planes appeared, and in the afternoon at about 2 p.m., more Japanese bombing was done. Damage during this first day's bombing was largely confined to the Harbor area, where the Pan American Airways tanks were destroyed and the antiaircraft guns of the PENGUIN silenced. That ship, no longer useful, was scuttled by her crew. Casualties on the PENGUIN included Ensign White, who was killed by a machine gun bullet. Chief Machinists Mate Krump was also killed. Lieutenant Haviland had a minor shrapnel wound in the wrist. Ensign Wood had a scratch across his body. There were other casualties during the bombing but no other names are known.

On the following day, December 9, 1941, there was more bombing both morning and afternoon. It is believed that some time during these two days the new fuel tanks at Cabes Island were destroyed by our own forces. Relatively little damage was done by bombs in Agana. Mrs. Mesa's house, back of the jail, received a bomb hit. That bomb missed a splendid chance for a good deed since all of the Guam Japanese were interned in the jail at the time. A better aim would have wiped out most of Guam's Fifth Column!

On the morning of December 10, 1941, the Japs began coming ashore at 4:00 a.m. There were several ships located at various points around the Island. Landings were made at Pago, TalofaI, Inarajan, Merizo, Unatad and several places in the north of the Island, although the main force came ashore at Apra Harbor area. Our forces there surrendered before 6 a.m. and the casualties were probably a dozen or more killed and a good many wounded among the marines and sailors. There were probably more than this number of casualties among the Guam Militia and Insular forces.

Part of the Insular Force was on duty in the streets of Agana with orders to prevent looting. The nurses heard shots at various times but first learned of the presence of the Japs when Bill Hughes, Public Works labor foreman, reported to the hospital for treatment at about 4 a.m. Hughes had been driving his wife and sister-in-law in from their ranch when Jap soldiers leaped on the running board. The soldiers used their bayonets and Hughes stepped on the gas, knocking their assailants off the car. Both women were bayonetted, the sister-in-law fatally. Hughes himself was badly bayonetted about the arm. A little later Ensign Wood,
who was still a patient in the hospital following the PENGUIN accident two days before, came over to the nurses quarters and notified them that the Japanese had entered the city.

It is understood that the Governor surrendered formally at about 6 a.m. At about this time the deaths of Lieutenant Bright and John Kluegel occurred. Lt. Bright was driving from his quarters back of the officers' club to Agana to surrender. He was shot in front of the officers' club, dragged from the car and bayoneted. Mr. Kluegel had taken refuge with various other officers and civilians in Government House. The Japanese were outside. He remarked that he thought he would go out and give himself up. He walked to the door and went out with his hands above his head. He was bayonetted and killed at the doorway. Chief Yeoman Blaha was shot and then bayonetted while lying on the ground. It is presumed that this took place near the Communication Building which had been the target of much of the bombing but which had not been hit. (Machine gun bullets intended for the Communication Office had hit each of the wards in the hospital, but had caused no casualties there). Blaha yelled "Captain" and the Jap soldier, who was wielding the bayonet, finally called an officer. Blaha was badly wounded but was still alive when the Americans were evacuated on January 10, 1942.

After the surrender, the doctors and nurses were kept in the hospital compound. Most of the officers and a few civilians were kept in the Insular Force barracks (formerly the Public Market) between the Government House and the Public Works building. Most of the sailors and marines and some of the civilians were held in the cathedral. These latter had the worst time. Their rations were one potato and a thin slice of bologna, twice daily. These were often served, however, on Minton China looted from the various quarters. This particular Minton probably came from Captain (Doctor) Lineberry's quarters. The officers in the barracks were somewhat better fed. The nurses were kept in their own quarters and allowed to eat their own food. The maid, Maria, was allowed to shop at the Commissary. After a few days the nurses voluntarily reduced their eating to two meals a day, knowing that the Japanese would not import food and that the Island would soon be hungry. They were not especially discommoded by the Japs, although soldiers and officers frequently passed through their quarters. Miss Fogarty was slapped by a soldier when she failed to understand what he wanted her to do with regard to a wounded man.

Their main source of news came through Mrs. Mesa who invented illness for several of her children and brought them in with whatever news she could gather from the radio or the Chamorros. The Chamorros were often mistreated by the Japanese, but the latter had brought the standard ration of prostitutes with their army and their was no wholesale violation of native women. Julia, the maid at the beachmaster's quarters in Piti was killed. So were many others but their names are not known.

It is believed that 5,000 to 7,000 troops were landed in Guam. They took over everything, but were not able to keep everything going. Mr. Feary was frequently called upon to help with the pumps at Agana Spring. Mr. Encerti, the power plant foreman, was at large for several days on his claim that he was an Italian national. This bit of strategy did not work for long however, but he was frequently released temporarily, to repair machinery at the power plant. The hospital laundry also needed attention from these mechanics several times. The only white man at large on the Island was George Scharff, the dredge captain. Scharff actually had German citizenship although for years he had tried to become an American citizen. It was obviously to his interest to claim the German citizenship in order to stay in Guam with his family.

There was much looting throughout the Island. Houses were searched for valuables and clothing, but some of the latter was distributed to the men when they were evacuated on January 10th. The Japs had a passion for beds. These were seized anywhere and everywhere they could be found. Japanese soldiers would remove one of the beds then place two others side by side. They adjusted the mattresses on the two beds and

APENDIX F-2
indicated that three nurses would be expected to sleep there. The nurses, however, took turns sleeping on the divan in their living room. Miss Yetter and Miss Christiansen had moved their bicycles from the laundry under the house up on their porch. They were not molested but a few days before the evacuation, after the nurses had been moved to the native nurses quarters, they saw two Japs riding wildly around the porches of their former home.

Twice during the month of imprisonment in Guam, all of the Americans were taken out of confinement to witness the armed might of Japan. The first occasion was at the head of the parade the Japanese general rode in state, in Dr. Gottlieb's car. This car, with its swank fittings and chrome plates, was reserved for the senior Japanese General Naval Officer in Guam. (Government House, as might have been expected, was taken over by these worthies and Mrs. Sawada, Guam's principal feminine fifth columnist, was installed there — a local Queen). About 5,000 troops paraded on that day, past Americans who had been brought from their jails to watch. The other occasion when the prisoners were out for a few brief hours was when they were all taken to the officers' club to witness maneuvers arranged by the Army. These maneuvers were in the nature of a landing attack and were designed to show the skill of the Japanese Army in such affairs. While at the club it was noted that the Japanese officers had the place in general disorder and that stables had been erected near by. Apparently a considerable detachment of cavalry had been brought to the Island. Not all of the Japanese riding had been done on horses, however. When the nurses were placed aboard a truck to be taken to Piti for evacuation on January 10th, they noted many wrecked cars along the roadside. The Japs were unable to handle high powered American cars and many of the island automobiles were wrecked against coconut trees within a few weeks. The nurses had been told to pack suitcases for the trip and to place anything they wanted in trunks. They sat on the suitcases on the way to Piti but never expected to see the trunks again. However the latter turned up on the Argentina Maru and were taken to Zentsuji.

Included among the evacuees on the Argentina Maru were the five nurses and Mrs. Hellmers and her baby. Little Miss Hellmers was born on November 21, 1941. Left behind on the Island were two men too ill to move. (One was Chief Yeoman Blaha, the other a Marine). There were also three radiomen in the hills hiding out with natives and attempting to send messages. All bamboo Americans except Scharff were removed but none of their families were taken off.

The trip to Japan took four days and was made in the hold of the Argentina Maru. Ventilation and sanitation were practically non-existent, although prisoners were allowed above deck in small groups once each day. It was the low point of misery for all. After arrival in Japan there was a further delay of 24 hours before they were taken ashore. Because the Argentina Maru was far too large to approach the docks, it had to lie several miles offshore. All of the prisoners were herded into an open lighter for the trip. A cold rain fell. The enlisted men, most of them wearing only shorts, suffered acutely during this disembarkation and in the night which followed, All were taken to one of the barracks in the large Zentsuji military cantonment. Their barracks was fenced away from the others, with special guards. There were no stoves on the first night and no blankets or bedding were supplied. Mrs. Hellmers and the nurses got the first stove, the Governor the second. Gradually more and more stoves were supplied. None of the men got pneumonia and the health of the camp was excellent.

The civilians were moved to Kobe within ten days and the nurses and priests were sent to Kobe on March 12. At that time the camp was beginning to be better organized and the senior officers were installed two in a room, junior officers 7 in a room, and the men were not impossibly crowded in their barracks. All the men wore beards, although the Japanese after the first few weeks required that these be trimmed or shaved off. Many of the officers and men trimmed their beards and shaved their heads. They were allowed baths once each week. They also washed their clothes on bath day.
On such occasions they would call on the nurses who had the only iron in the camp. Electricity was on for only one hour each night, but the nurses ironed what shirts they could. Those who could not get their clothing ironed went rough dry. Shortly after the nurses left on March 12, the embassy staff sent two Victrolas and some records to the camp. At the same time the men could also obtain pencils and paper and a few other materials. All were paid in accordance with the Japanese pay scale for similar rank and ratings.

The diet was mostly rice and fish but was no longer reducing most of the men. Some of the plumper ones had lost up to 45 pounds. A few of the prisoners were responding very favorably to a non-alcoholic regime. Dr. Cecho was reported somewhat downcast because his orders were actually in Guam at the time of the invasion and he was only waiting the next transport. Dr. Van Paennen was worried because his allotment had not yet been registered. In the main, however, all of the officers and men were standing the imprisonment very well, although they were deprived of many of the things we consider necessities. They learned in time to sleep on mats, but still need special foods, toilet articles, books (some had been sent through the embassy) and word from their families - especially the latter.

The Japanese exchange ship on which the nurses travelled to Tourenco Margues had on board a radio operator who had been captured in China and released from Zentsuji about June 10th. He managed to be reclassified as some sort of correspondent and brought late news of the Guam prisoners. When he left the camp all were well and there had been a steady improvement in the facilities of the men.

Fred Campbell was starting up a canteen and little by little more recreation facilities and comforts were reaching the men.

A few days before sailing, which occurred about June 15, the nurses saw Charlie Gregg, the Pan American Airport manager. He was interned with other Guam civilians in a fifth rate Kobe hotel but was permitted to go, occasionally, under guard to make necessary purchases in the city. He still had some of the money he had carried out of Guam.

On the way home in the Japanese exchange ship, Miss Fogarty met and married a member of the American consular service. She stayed with him in his new station in Africa. The others from Guam, Miss Olds, Miss Yetter, Miss Christiansen, Mrs. Jackson, Mrs. Hellmers and her infant daughter, arrived in New York on the GRIPSHOLM on August 25, 1942.

END

Since this news, Chief Biaba is now in Japan - OK and also the radioman which was hidden - do not know the names.

* * * * * * * * * * *

(This Guam Diary was provided by Carl E. Sawyer. He obtained a copy from Mrs. Parker, the wife of Chief Pharmacists Mate Parker. Parker and Sawyer served together in Guam in the late 1930's)
RADIO GUAM HISTORY


Guam's Naval Communication Station, more commonly known as NavCAMs, celebrates its 75th anniversary.

When people drive past the Finegayan facility, now linked to satellites as well as to receivers on land and sea, it is hard to imagine that the familiar equipment present in 1981 would be considered science fiction to the personnel assigned to Guam 75 years ago.

Continued on page 18

18--NCVA Newsletter, Eugene, OR., July, 1982

Radio Guam Continued from page 1

It was on Jan. 26, 1906 that Navy Radio Guam first broadcast as a communication link between the islands of Hawaii and the Philippines.

The first station was crude, consisting of a 3,000-watt spark transmitter, a battery operated receiver and a kerosene engine power supply. The antennae consisted of two long wires attached to wooden poles. The facility was built on Mount Macajna, a hill two miles southwest of Agana.

Except for six hours a day when atmospheric conditions allowed direct contact to San Francisco, all eastbound messages were sent via Pearl Harbor. Westbound messages went directly to Cavite, the Philippines.
In 1917, a 30,000-watt transmitter was established at Libugon, near present day ConNavMar Headquarters on Nimitz Hill. According to early Naval records the new transmitter, 10 times greater than its predecessor, was notorious for its wide band and scratchy note. Although the new transmitter was strong enough to contact San Francisco directly, the gain in power caused enormous interference in the transmissions from Hawaii and the Philippines.

Reports of receiving Guam came from ships at sea near the southeastern coast of Brazil.

The new transmitter was too powerful for the pole-and-line antennae. While working on the 600-foot replacement tower, a local worker fell to his death.

A second station was established near Yigo in 1921. It operated only three years, most successfully at night.

In 1922, a U.S. Naval Compass Station installed in a small wooden shack atop Mr. Santa Rosa transmitted one of the first radio aids to navigation. The mountain had its drawbacks; all supplies and equipment had to be carried to the top by caribao. The facility closed in 1925.

Also, in 1922, a distant control and receiving station was established at Merizo. At that time there were no roads to the southern village so all equipment was transported by boat, a near impossible task in the rainy season. Storms and numerous brush fires often damaged the inaccessible lines between Merizo and Libugon creating message handling delays.

In 1925, the Merizo transmitters were moved to Agana near the Plaza de Susanna, a location far superior to Merizo. The average message to Pearl Harbor from Agana was three hours compared to seven-and-a-half from Merizo.

Until World War II, the Agana station handled all trans-Pacific communications.

With the occupation of Guam by the Japanese on December 10, 1941, Navy Radio Guam remained silent until July 24, 1944, when a mobile communications center was established in Agat.

Following the American cleanup of Guam in 1945, the Joint Communications Activity was established near the present station in Finegayan. All its 91 transmitters were located at Barrigada with the combined broadcast power of 800,000 watts.

In 1948, the Finegayan facility became known as the U.S. Naval Communication Center Guam, a primary station in the Naval system.
Personal recollections of William F. Hook, LTJG USN RET:

There were six of us (all RM3) at the Receiving Station, Goat Island in 1927, waiting for transportation to Guam. Follien, Lange and Orange were lucky. They were assigned to NPG at 100 Harrison Street in San Francisco while McMartin, Perkins and I were sent to Point Reyes. CRM Viall met us at the railroad. When he saw our "crowns," he said: "I didn't ask for radiomen. I asked for a 'working party!'" We had nothing to do with the Radio Compass Station but were there solely for shoveling sand off the plank road, which ran from the main road out to the radio station. We were out there for about two months or so in September and October 1927.

When we were ordered back to San Francisco, the detail yeoman told us: "You are traveling in style on the SS PRESIDENT CLEVELAND." When we boarded the ship, we were pointed to Steerage Hold #1. You can imagine what style that was! Our official orders stated that we were provided "TROOP QUARTERS" which apparently was the same as Steerage.

The first night out, some of the senior petty officers tried to crash the dance in the first class part of the ship. They were thrown out by the mate and other members of the crew. It could have been a nasty confrontation but everyone cooled off and forgot about it. It was an interesting cruise for most of us as we stopped at Honolulu, Yokohama, Kobe, Shanghai, Hongkong and Manila. The USS GOLDSTAR was in the Navy Yard Cavite. We were taken there for FFT Guam.

As I recall the radio gang on the GOLDSTAR consisted of CRM White and RM1 Bowman. The six of us were assigned watches. On the midwatch we had to copy PRESS from Manila. The night I was on the operator at Manila was drunk or something. He started tape at very high speed, then would break it and start over. He never did get it going properly. Of course in the log I indicated what happened. Some of the other operators must have had problems copying PRESS too because, when we landed at Guam, CRM Hill, CRM in charge, asked our names and then said: "Hook, McMartin and Perkins are going to Libugon (Radio Hill) and Follien, Lange and Orange will stay here at Control in Agana." This was just a week or so before Christmas 1927.

As part of our watch duties at Radio Hill (the transmitter site) we had to send a "POM SAT" message and also a laborers report as there were several native laborers working in addition to the riggers, etc. One day while sending the message on the landline, the operator at Agana asked me my name. I told him. He said he was CRM Hill and wanted to know if I'd like to transfer down to Agana. I told him yes. In a short time I was transferred to the big city of Agana. I learned later that the RM1 on the GOLDSTAR had reported that I, among others, was a poor operator.

At Libugon we had two 100 KW arc transmitters and one 30 KW arc. The 30 KW was up quite a bit of the time. The 100 KW arcs were used only when NRM Pearl Harbor lost the HF circuit to NPO Cavite.

When we wanted to bring up one of the 100 KW arcs we had to notify the Power House in Agana as it really loaded their system. The Chief had a 4 x 4 about 8 feet long which he used to reach in on the big squirrel cage motor to pry it over a few times to get it rolling a little before they closed the circuit breaker. The voltage was fluctuating all over the place until it came up to speed and everything settled down. Really primitive stuff compared to nowadays!

I think those old arcs were the cause of some of the OTC becoming alcoholics. With all of that pure grain alcohol available I guess it was quite a temptation! To supplement the arcs at NPM we had homemade breadboard setups with changeable coils, etc. They looked just like the pictures in the Amateur Handbook. We used 500 cycle AC on them and they sounded pretty good. NPO used to have problems copying us on HF. A CRM named Long

APPENDIX X-1
Personal recollections of William F. Hook, LTJG USN RET (continued):

built a detector 2-step receiver and sent it to them for use on the NPN circuit. After that they seemed to get us better. The RG receivers which were GI worked pretty good on 8 mHz but with the RF stage bypassed. Commander Dow developed a 5 KW transmitter at NPO in 1929 to work NRM. It really put a strong signal into NPN. Even the oscillator, which worked continuously, could be heard. We could tune in the frequency of that oscillator and when they keyed it, it really put out a signal!

NPG was sending PRESS to NPN and NPU on a schedule basis at that time. Jimmy Foster RM1 at NPG would have the mid watch while I was on the evening watch at Guam. Our watches seemed to coincide most of the time. He would punch up a lot of news items out of the SF Examiner without any type of censorship. We, in turn, would send those items to the Asiatic Fleet on our midwatch just as received. We received a coded message from CINCAF giving us heck for sending some of them without censoring them. I can't recall the details but apparently he objected to some of the SF Examiner's reporting.

We had a regular crew at NPN to put out the news. A native yeoman who was really good and a native striker or two. The paper was called the "Guam Eagle." It also included a page or so that was copied at the CABLE STATION on the transpacific cable.

When the NRM to NPO high frequency circuit was 100% dependable, CINCAF, on the USS PITTSBURG, came to Guam and took a lot of the radiomen for reassignment to the Asiatic Fleet as they were no longer needed to relay transpacific traffic. I drew a short straw and was scheduled to be one of them. Perkins volunteered to go in my place. He wound up on the USS HART, a minelayer. I always wondered what I'd have done out in the Fleet. I ran into him a few years later when he was on the USS ARGONAUT, a submarine.

At Guam, whenever they had a vacancy, they always asked for RM3 or RM2 to fill the vacancies, as they wanted to promote their own men. Several of us were lucky enough to be rated RM1 before our time was up, but in order for me to get promoted, I had to transfer to the USS PENGUIN, relieving an RM3 who had been unable to keep the transmitters and receivers in working order. I was assigned to the ship on paper, but on temporary duty at NPN, so when the RM3 had problems I had to go on board. What a mess things were in! The ship had left the Navy Yard Cavite not too long before and, for example, the battery charging circuit was in reverse polarity. I was lucky enough to get everything working and then, as an added feature, "I SHINED THE SPARK GAPS" on the 1/2 KW EMIL J. SIMONS spark transmitter. I was always able to say that I had made RU by shining the spark gaps!

At the time I left NPN in November-December 1929, there were only two men on watch at the control station, with the CHM Traffic Chief on the day watch. There were several operators out in the Security Group and about five or six radiomen up at the transmitter station on Radio Hill Libugon, so we were few as compared to some of the bigger stations. We had a baseball team, a basketball team and a swimming team. It seemed we all had to take part. Very few spectators were radiomen.

On the return trip to the U. S. on the USS CHAUMONT, we were paid in gold pieces, $20 coins to the nearest twenty dollars of pay due. I got three of them and, of course, spent them as soon as possible. We stopped in Honolulu. I was assigned to Shore Patrol. I asked "How come?" The yeoman said: "We were going down the list of first class petty officers and saw your name and we just had to "Hook" you!" I was assigned to the Alai Park district where all the massage joints, etc, were. What an experience! What a relief to get back to the ship!

I was paid off in San Francisco and got home in Utah just after New Years. It was so cold that I almost froze whenever I went out of the house. I could just imagine steam—

APPENDIX X-2
Personal recollections of William F. Hook, LTJG USN RET (continued):

heated buildings that I'd seen. I reenlisted for the 4th Naval District and wound up at Lakehurst, New Jersey, where I made interesting trips involving lighter-than-air ships. I made a trip to Houston, Texas, on a train with the Navy Balloon Team where my job was to copy weather reports for the aerographer and to check out a receiver which the pilot, Lt. Settle, would use to copy upper air reports. He could copy code pretty good. He didn't win the race but came in second (1930).

I was on the airship USS LOS ANGELES (NZRLA) for maneuvers with the fleet in the Panama area in 1931 and was a crew member of the USS AKRON (NZRLB) in 1932 when we made a cross country trip in May 1932 and then maneuvered with the fleet in the Pacific. I had the distinction of getting the first discrepancy report on the USS AKRON. There was a very unfamiliar call in the heading of a message. I had sent it twice and some "hot-shot" at NAA wrote me up.

I am enclosing a list of Guam personnel, strictly from memory. I don't have any Xmas cards or watch lists from back then. They weren't all there at the same time as some were reliefs for others, etc. (SEE APPENDIX C - Personnel Lists).

*** * * * * * * * * * * * * * *

Personal recollections of Anthony G. Alvey, RM1 USN (Ret):

Your inquiries about NPN sure brought back old memories. Boy, Oh Boy, what a nice place for duty. Talk about a slow life - Boy, that was it!

First of all, I was at Agana, NPN. I finished up a two year tour of duty at NPG in mid-1934, saw a notice on the bulletin board requesting volunteers for duty at Guam. Since I was a newly married man, I volunteered, boarded the CHAUMONT and away we went. However, about one day out of Guam, the CHAUMONT received a despatch directing the ship to transfer me and several other unfortunates, not to Guam but to the USS GOLDSTAR (AG-12). I was only on the GOLDSTAR for about three months, then was transferred to NFN - about August 1934.

The Guam Radio Station was situated right in the middle of Agana, near the Governor's Palace. The Governor of Guam was Captain George A. Alexander. The Communication Officer was Lieut. Ekelund. While I was there we had two Chiefs in charge: CRM Mark Hiestand and CRM Clarence B. Weems. CRM James R. Foster was there on temporary duty for a while.

Other radiomen were: A. C. Promiers RM1, A. B. Carter RM1, R. Middleton RM1, M. S. Whitney RM1, Alvin Jenkins RM1. Middleton and Carter were material men. Also: Alvey, Hizme, Leon Caguoia (Filipino), H. W. Manley, J. E. Roley, R. C. Tucker, and C. Uzzell. All of the last group were RM2. (SEE APPENDIX C - Personnel lists).

The station ship was the USS GOLDSTAR (AG-12) with Jack Holt RM1 in charge and USS PENGUIN, the station tug, with R. J. Hovila RM1 in charge. The GOLDSTAR radio call was NASJ and the PENGUIN, NECT. On mid watches we guarded 355 kHz and copied PRESS from WCK.

As for equipment, the best I can remember is for the intermediate frequencies, 355 and 500 kHz was a TAB, I believe, but the HF is now beyond me. Anyway we had two HF transmitters. There were two men to a watch, one split-toned on 355 and 500, the other on HF with NPO. We were usually on watch for three evenings, three mids and then three days.

I used to wonder whatever became of Caguoia. He was married and had three kids. He had 16 years service and was a Filipino. All of the above named men were not stationed there at the same time.

APPENDIX X-3
Personal recollections of Anthony G. Alvey, RM2 USN (Ret): (continued):

My wife sure liked it there. She had two house girls, five dollars a month each. She had the life of Riley. The only thing she worked at was cooking.

Once a year I meet up with Joe Royer, now Lt(jg) retired. He was on Libugon Hill when I was there, otherwise I never see anyone who used to be on Guam.

So, that is about all I can recollect. I guess I am lucky to drag this much out since it has been over 50 years since I was in Guam. I can't believe it!

Personal recollections of Harold W. Manley, FSS1 State Dept. (Ret):

You are asking about NPN in the days I served there from 1934 until 1937. Duty at NPN was very interesting for me and considered extremely dull by some of my fellow radiomen. I guess that you can truthfully say the reasons that I enjoyed the duty there was for a variety of things. These consisted of a hobby of collecting sea shells at low tide, playing baseball, swimming and playing volley ball out at the Recreation Beach.

While I was there I tried to get in the material gang but they said I was too good an operator (baloney). Anyway, I cannot with certainty even tell you what makes of receivers we used. I only remember that near the end of my tour they did bring in a new receiver - a big tall one, the correct nomenclature I don't even recall.

While I was serving at Bar Harbor, Maine, we had a semi-diesel engine for emergency power. Everyone had to learn how to start it. Well, about 1937, they unpacked that same semi-diesel in Guam and proceeded to set it up for emergency power. A man came with the engine. After the preliminaries, he tried to start it with negative results. I happened to have the duty or was just getting off watch and I noticed that it was my old Bar Harbor acquaintance. (A name plate on the engine confirmed the identification). The poor chap who had come with the engine was somewhat surprised at not being able to start it. I volunteered to try and, using the set procedure of my Bar Harbor duty, it took off right away. That is about the only time I ever had any claim to success in the material line.

During my Navy stint, I served at the Great Lakes Training Station, USS TRACY, USS BORIE, RDF Station Bar Harbor, USS WYOMING, NAVSTA Guam, USS UMPQUA, NAVSTA GOMO, American Embassy Rio de Janeiro, USS CANBERRA (CA-70) in 17 missions with 5 battle stars, USS TUCSON, USS JUNEAU 2nd, American Embassy Tehran, Iran, and finally NAS Corpus Christi.

While I was in Guam we had an earthquake of strength 7. It was strong enough to knock four-legged animals down and also this two-legged one as we sped alongside the radioroom toward the road where dust reached over our knees before the earthquake stopped. Native Guamanians were screaming and the church bells were ringing without anyone pulling the bell cords.

At Guam I was more or less a junior operator assigned to the ship-shore circuit split-foned with the distress frequency - 500 kHz. The senior circuit was with NPO/NPM and, under certain conditions, with NPG. However, since I was not on that circuit, I cannot be certain about NPF.

On 355 kHz we worked the stations ships USS PENGUIN and USS GOLDSTAR which made periodic trips to Japan, China and the Philippines. We also worked other Navy ships enroute across the Pacific. On 500 we covered the distress periods as well as copied weather reports and occasional messages from commercial ships bound for the Orient or the U.S. The 355 operator also copied PRESS in the PM. On 355 we also worked the transports CHAUMONT and HENLEARN as well as others such as the RAMAPO.

Appendix X-4
Personal recollections of Harold W. Manley, FSSJ State Dept. (Ret) (continued):

I recall copying a message from a commercial ship that had been caught in a terrific storm and had lost their antennas and later fixed a jury rig and sent us a weather report which included the lowest barometer reading on record, I heard.

The single men's quarters at Guam was called the Zoo. We had a Chief living at the Zoo until his wife arrived. This Chief (I don't recall his rate) was an old friend of Ed Musick, the pilot of the China Clipper on her first official flight across the Pacific in 1935. This Chief invited me to a banquet at the Elks Club for the entire crew of the China Clipper when she arrived, including Musick. I could have had them all sign my "First Flight Cover!" We all bought one - at least I did. They cost $1 apiece I recall. Anyway, even plain unsigned covers went up in price dramatically. If I had had enough sense I could have had the entire crew sign a few that night as we all got fairly mellow before the evening was over. I think that when I left the Island, those plain first flight covers with no crew signatures had jumped to something like $26 apiece. Whew, I missed the boat that night!

After I went into the Fleet Reserve, I had no trouble getting employment with the State Department because of my previous duty at foreign embassies in the days when the Navy loaned operators to the State Department.

While I was with State, they created the U. S. Information Agency and I was transferred to that agency. After three years in Bombay, India, I was called back to help set up the U. S. Information Agency Wireless Bulletin. RCA handled the State Department Bulletins (BARDS) after the Navy discontinued that service. The USIA took them over from RCA. I worked there for some years. When radio teletype was about to start, they transferred me to the Technical Supply Depot where I had to buy, stock, record and ship parts for the Radio Teletype Group around the world. In this job I got an agency award which led to an officer appointment in USIA. I was shortly transferred to Tehran, Iran, as Chief of the IBS service there. My area of responsibility covered the Middle East, North Africa and Southeast Asia. I was promoted from Foreign Service Staff Officer grade four to FSSJ and, after four years, was transferred to Helsinki, Finland. I retired in 1965 after a disabling injury to my back.

* * * * * * * * * * * * * * * * *

Personal recollections of Clarence G. Rhodes, LT USN (Ret):

I served in Guam from March 31, 1936 until May 2, 1939. I went out to Guam on the USS CHAUMONT. I had my family with me. Also on board were Captain McCandlish, who was going out there to be the Governor of the Island. Commander McRea, the Governor-to-be's Aide and LTjg J. W. Chittenden, Communications Officer, were also on board.

I was watching two children in the pool on the CHAUMONT one morning when a man in civilian clothes came alongside me and introduced himself as Cdr. McRea. I told him my name and destination. He asked me whether I had requested that duty or had been detailed. I told him that I had requested the duty. He said: "I think you should have your head examined." He and his wife loathed the place. Every time I met him later on the Island he would ask: "Rhodes, how do you like Guam now?" I would reply that I liked it better all of the time. He would say: "I still think you should have your head examined".

When I first arrived in Guam, we were assigned to a vacant set of quarters up in the hills at Libugon, the former Navy transmitter station which was, at that time, assigned to the Security Group. I worked at the Communication Station in Agana, commuting up and down the hill in an old Chevrolet sedan which I had bought, jointly, with Keesey RM1, a member of the Security Group.
You spoke of working NPN from NR1. I guess that was in the days of Spark and Arc transmitters. The towers that once supported the old Spark and Arc transmitter antennas were still up there in Libugon, but the transmitters had all been moved down to Agana. The Navy had run a strong-back cable between the top of the towers to support receiving antennas for the Security Group people up there. They used no transmitters of course. We lived up there for about three or four months. I knew what was going on up there even before I was quartered up there. I did not nose around or ask any questions. However, after my security clearance was approved, Wood CHM in charge up there, gave me a cooks tour of the whole outfit. I learned that, when Libugon was in use as a transmitter station, that they had continuous trouble with control lines to the communication station in Agana. They used overhead lines on open poles.

I stood regular communication watches in Agana for the first three or four months. I was coming down the hill one morning. I stopped and picked up a native man and gave him a ride to Agana. He had been up to his ranch in the hills to get his supply of tuba. Tuba is the milk or juice from the bud of a coconut palm. It looks very much like cows milk. It will ferment and how. It smells to high heaven. He wanted to compensate me for the ride by offering me a drink of his tuba. The smell of the tuba was more than I could take, so I managed to decline.

About that time I found suitable housing down in Agana and I managed to get assigned to the material force. I found housing right next to the Naval Hospital and within about two blocks from the communication station. I did not need a car then so sold my half interest to Keesey.

During my three years there, Governor McCandlish was relieved by Captain James T. Alexander and Lt. B. C. Allen relieved Lt. J. W. Chittenden as Communications Officer.

A. B. Carter (795 S. Pacific Highway, Rickreall, Oregon, 97371, W7LQ) was the CBM in charge of the material gang when I got there. He was relieved by Spicer, CBM, who was on his second tour of duty in Guam. Before I left, Carter was back for his second (or third?) tour of duty. It must have been pretty good duty when people do two or three tours out there!

During the three or four months that I stood watches in Agana, we worked NPO on the 4,000 kHz series. We worked the GOLDSTAR, the station ship, on trips to Manila, Hongkong, Shanghai and Tsingtao, China.

After serving in Guam for about a year, you and your family were entitled to what they conveniently called a "Health Cruise" on the GOLDSTAR. It was more of a health wrecking cruise. It was more of a shopping cruise to ports in the far east. You could forego the health cruise, if you desired, then the Navy would let you make contact with the transport which brought your relief. That way you could visit the same ports that the GOLDSTAR made and stay longer in each port and, of course, with more comfortable quarters. My wife and I elected to forego the health cruise and travel on the transport.

The GOLDSTAR hauled coal from China and Japan to fuel the Navy power plant in Agana. We worked the GOLDSTAR on HF but I can't remember the exact frequency. We worked the PENGUIN down in Apra Harbor and the GOLDSTAR when in port on 355 kHz. We also guarded the distress frequency of 500 kHz. The PENGUIN was the station tug used to dock and undock larger ships in Apra Harbor.

The radio equipment at Agana consisted of two Navy Model HG HF receivers and two or three other old commercial receivers. The transmitters were one Model TAB, two Model TBA and one Model TAQ. While I was there we received one or two each of Navy Model RAK.
Personal recollections of Clarence G. Rhodes, LT USN (Ret) (continued):

RAL and RAG receivers. The receiving antennas ran up to a strong-back strung between two small towers almost directly over the communication building. The transmitting antennas ran up to a strong-back between two towers on top of a steep hill directly behind the station.

NPN did not handle a great deal of traffic in those days, unlike it was when you were at NIM. NPN became the end of the line after NIM started working NPO direct. Our traffic consisted mostly of Naval Government Guam and a few other small government activities. Pan American Airways opened their Clipper service to the Orient while I was there. They had their own communications. Globe Wireless had a station on Guam and the Pacific Cable Company had an up-station in Guam.

Quite often, for no apparent reason, all radio signals would just fade away. Absolutely nothing, not even static. The receivers were as dead as if you had cut the power off. It acted very much like a cloud moving across the sun. It would last for 30, 45 minutes or an hour. Then signals would come back in, like a shadow from a moving cloud. It would even ground the telephone lines down to the Harbor Masters Office in Apra Harbor and the Marine Barracks at Sumay. Globe Wireless experienced the same thing and the cable station said the same thing happened to their underwater cables. I cannot verify the cable part of this phenomena. It was later determined that the disturbance resulted from sunspot activity.

The personnel that I remember, repeating some I have already mentioned: Weems CRM, Carter CRM, Spicer CRM, Foster RM1, Wood CRM, Keesey RM1, Alvey RM2, Storer RM2, Tucker RM2, Pinkham CRM and others I can't remember. I remember Carl Sawyer alright but I am not sure about Joe Young. He came out there the year that I left, 1939. (SEE APPENDIX C Personnel Lists).

My wife was a teacher when we were married. Anyone with any teaching experience was much in demand in Guam. The native schools were all conducted in English of course but they also had a separate "American School" for Navy and Marine dependents and the dependent children of other American employees on the Island, such as Pan American Airways, Globe Wireless, Pacific Cable Company. My wife taught English during the first year there, then English and mathematics and was the Principal of the American School during the last two years.

Back to the radio material gang. During my tour the Navy transferred a one cylinder diesel driven alternator power plant from Bar Harbor, Maine, to Agana to be used as an emergency power source for the communication station. The transmitter building was extended to the south of the building to accommodate the power plant. The installation was done primarily by the Navy Yard with the radio material gang observing and assisting. I gained enough experience with the installation to be qualified to start, stop and operate the power plant when the regular power would fail, which was quite often. The Navy had initially installed power lines around the Island to provide for lighting purposes only. The natives had increased their power consumption tremendously by purchasing such electric appliances as washing machines, radios, refrigerators and fans. The power plant was soon reaching its capacity. The diesel plant at the communication station was needed to prevent communication outages when the Naval Station power plant was overloaded.

Some of the Navy personnel sent out there for duty could not take it. The ones who liked night life and high expensive entertainment could not take it in Guam. During the time the transport dropped them off and made the loop around Asia and got back to Guam, these men and women had already made their reputation with native taxi drivers and the townspeople. The Governor would soon get the word and he would pack them up and send
them back to the States on the same transport that brought them out. I am not criticizing the people who got sent back home. They were just not accustomed to the isolation and the kind of life suddenly thrust upon them. In order to survive in Guam, you were forced to get involved in some kind of activity and push it vigorously. Some took up photography. Others golf and tennis. Many looked for shells along the beaches. Swimming was good most everywhere. Others retired to the bars and consumed beer.

The sound technician at the Agana Theater, the only theater in Guam at that time, was an ex-Navy printer. His enlistment had expired while he was in Guam. He did not reenlist and stayed there, married a native girl. He did quite well for himself, financially. He had acquired three kids during the process and felt it was time to get them to the States and away from that heat. It is not good for Americans to stay in the tropics too long.

A Mr. Butler owned the Agana Theater, as well as the Guam "Emporium," the only department store on the Island at that time. He also had the Coca Cola bottling franchise on the Island. He too was an ex-Navy man who stayed there and married a native girl. With her help, and money, he really went to town financially.

The sound technician, who was leaving, knew that I was qualified for the job at the theater and asked me if I wanted it. I told him that I did and through him and Mr Butler they wrote a letter to the Commandant for special permission for me to work as the sound technician at the theater. They had to convince the Commandant that I would not be competing with any qualified civilian for the job. The Commandant approved the request and I worked at the Agana Theater at night for three years while I was on the Island.

Back tracking to the Navy power plant. In the very early days, when the Navy first installed the coal burning electrical power plant at the Naval Station, they gradually started running high power lines around the Island. One of the native boys was flying his kite and got it tangled in the power line. He climbed the pole to retrieve his kite, got across two of the power lines which knocked him to the ground and killed him. Word quickly spread that electricity would kill. All of the natives developed a healthy respect for electricity. The amount of voltage did not matter, if it was electricity, they were deathly afraid of it.

During my employment at Agana Theater, Mr. Butler had two native boys, or young men, as projector operators. They could thread the machine, start, stop and fade out from one machine to the other perfectly, but that was as far as they could or cared to go. I had to go to the booth in the afternoons and unwind and check for breaks or damages to the film that might cause a break during the show, then rewind the film. I remember we did a first for Agana Theater. The theater had run "The Jungle Princess" with Dorothy Lamour for a period of six weeks with one episode, two reels per episode. Mr Butler asked me if we could run "The Jungle Princess" as a continuous picture with no stops and no breaks or repeats that are normally shown at the start of each episode. I told him that it would take a couple of days to prepare the film. I went through the twelve reels and tied a white thread through the sprocket holes of the frame that I wanted the operators to frame on, instead of the regular starting frame. He advertised in the "Guam Eagle" that the "Jungle Princess" would be shown in its entirety in one continuous showing with no repeated segments. The people who had seen the picture each week for six weeks came back to see it again. They packed the house, filled the aisles and even the standing room. It was such a hit he held the film over for another month and ran it again with the same results. He said he was tempted to just buy the film and run it every month or two.

Getting back to the natives being afraid of electricity. One night during the show something caused a voltage overload which blew the main fuse and put the whole theater
in darkness. I got my flashlight and found the fuse box, replaced the fuse and restored power to the theater. When the lights came back on, my two operators were standing out in the middle of the street. They were not going to have anything to do with helping restore the power!

My wife and I enjoyed our duty in Guam very much. I liked it so much that I requested two extensions which were granted. We found the native people to be most considerate of other people, kind hearted and as innocent as children. It was one place in the world where an American dollar had not spoiled the people. If they liked you money was of no concern. If they liked you they would work for you for nothing. If they did not like you, you didn't have enough money to pay them to work for you. A lot of Navy people made the fatal mistake of talking to them like they were slaves. The next morning they would just simply not show up. The lady of the house would never know why. I am quite sure that conditions are not like that out there now.

Yes, Guam was a very important link in the communication chain across the Pacific during the early days of Sparks and Arcs. After NHM went to NPO direct, NPN became a station of lesser importance until after the Pearl Harbor attack. After the U. S. recaptured Guam, the Navy really built up a very large modern communication station there. All of that was after I left there in 1939.

I flew back through Guam in 1943 on my way to Shanghai for duty. A good friend of mine was the transportation officer at NAS Agana. He saw my name on the manifest list, met the plane, took me to the BOQ and got me tucked in for the night. When I woke I looked out the window trying to get oriented. I was confused at first until I looked to the northwest and saw a small rock island sitting on the reef between the water's edge and deep water. Then I knew where I was. I had searched for sea shells around that rock at low tide many times. My NAS Agana friend took me out to the new Communication Station. Man, it surely was nothing like the station that I had known back in the 1930's.

I would like to add a few comments on the school situation in Guam. The Navy Chaplain was the head of the Department of Education for the Island. He had native assistants on his staff. Each small village had their own school buildings with local teachers. English was taught in all the schools. I remember when Chaplain Mansfield came to Guam. The USS CHAUMONT sent a passenger list of people disembarking at Guam including a Lieutenant General Gerald Mansfield. That threw the Governor and his Aide into a state of shock. They thought a Lieutenant General of the Marine Corps was coming to Guam and they didn't know why. They had made no preparations to meet him. The CHAUMONT was about three days out of Guam. That gave them time to straighten things out. They jigged the message and jigged it again and finally had to send a message requesting information of the Lieutenant General they had on board. If the CHAUMONT had just added USN at the end of Lt. Mansfield's name, there would have been no problem!

I am sure that Hal Winters and some of the other Guam people have told you about the "Guam Eagle." It was published by the Navy Communication Office with Navy radio men providing the PRESS news. Two native men, Juan Castro and one other, plus one young native boy as typist, produced the paper on a mimeograph machine. It was the only printed news on the Island.

As to the "five point" circuit that Hal mentioned - I was in operations only a very short time. I don't remember a five point circuit at that time. There were only two men on watch during the night. One man took care of the NPO circuit and the other guarded 355/500 and copied the PRESS news.

I can't answer your last question about when the transmitter station at Libugon was
Personal recollections of Clarence G. Rhodes, LT USN (Ret) (continued):

abandoned. The two 300 foot towers were still there and still being painted and maintained by the Navy. The old Spark and Arc transmitters had been removed. The towers supported a strong-back for the Security Group antennas.

The original control and receiving station in Agana was a large square building about four or five feet above ground on pillars. The front part of the building housed the Communication Officer's office and the "Guam Eagle" office. The back portion of the building was used for the receivers. When they phased out the Spark and Arc transmitters at Libugon and went to MF and HF tube transmitters, they didn't take the trouble to extend the building on the same level. They just poured a concrete slab at ground level, constructed a building and installed the transmitters in a straight line, parallel to the back of the receiver building, then extended the roof over the new addition. I remember we had to go down about five or six steps from the receiver building to the transmitter building. The material gang used the under portion of the receiver building to store spare parts.

When the Navy brought the one cylinder semi-diesel driven alternator from Bar Harbor, Maine, to Agana for emergency power, they poured another slab the same size as the transmitter building and installed the diesel generator in line with the transmitters. The site for that new addition was taken from the Governor's garden. The Navy installed two Bates poles on top of the hill, strung a strong-back between the poles and ran the transmitting antennas up to this strong-back.

Placing the transmitters right under the receiving antennas was the very worst location on the Island that they could have picked. The old transmitter station at Libugon would have been an ideal location. They already had the building and the towers but there was probably a money consideration. Placing the transmitters in Agana created many problems for everyone. Interference for radio reception, not only for the radio station itself, but for everyone in Agana, the Governor, the Catholic Church across the street and everyone else who had a radio. That was about the time that HF radio broadcasting was coming on line. The Catholic Bishop liked to listen to Rome direct, and Berlin, London and New York as well. Interference from the Navy transmitters right next door messed up his programs!

I will tell you of one other incident while I was there. Every once in a while some interference would start that would completely obliterate all signals and shut down the station for an hour at a time. Chief Carter and I were ordered by Lt. Allen to find the source of the interference. We found nothing. We even used a portable, battery-operated radio to try to locate the interference, with no results. Finally someone, I don't remember who, suggested we start keeping a log of the times when the interference was experienced, with the name of the watch supervisor and the men on his watch. They kept the logs for a week or more. It did not tell much. One morning Lt. Allen gathered everybody together in the receiver room for a pep talk. He passed the logs around from man to man asking if anyone noticed anything unusual in the entries that would give us a clue to the source of the interference. One man said that he noticed that the interference never occurred on Storer's watch. That solved the problem! We rushed over to Storer's house, located directly under the receiver antennas. Storer had just gotten into photography in a big way. He had his own dark room and the whole works. He had a small, old electric fan to cool the dark room while he developed his pictures. The culprit was the fan. It had worn the carbon brushes and the brush spring was riding directly on the motor commutator generating an arc with a broad frequency range. Carter took the fan back to the station and found that we were back in business again. Lt. Allen paid Storer for the fan, handed it to Carter and told him to smash it. That incident proved to me the value of keeping records!

**************

APPENDIX X-10
Personal recollections of Harold M. Winters, LCDR USN (Ret):

It was during the summer of 1937, I was RM2 aboard the 4-pipe destroyer HOPKINS, when a message came through from COMCRUDESPAC in the DETROIT, A6P, asking for one RM2 volunteer for duty at NAVRADSTA Guam. I asked the Chief if I could get my wife, Marge, on the transport with me even though, as second class, I didn't rate transportation for dependents. He said they usually have a cancellation or two at the last minute and, if I had her there at the dock in San Francisco, they would take her along. So I got hold of my buddy, "Bubbles" Albert McCall Salem RM2, in the DETROIT and asked him if he could swing it for me. He said sure, just send in my name as a volunteer from the HOPKINS and he would fix it up. And he did. Only, when Marge got to Fort Mason, the purser of the damn transport wouldn't cooperate and we shoved off leaving her crying on the dock. She had to come out to Guam commercially as far as Manila on the SS PRESIDENT COOLIDGE and there my buddy, Bert Klombies RM2 in the GOLDSAR, met her and brought her to Guam.

When I first reported for duty at Guam I checked into the "Zoo" which was the privately owned big house on the hill overlooking the town of Agana, where the enlisted men lived - those who didn't have their dependents with them. There was no government housing for anyone, officer or enlisted, single or married, except for the Marines at Sumay. Of course the Governor of Guam, Captain Alexander, had government quarters. He lived in the Governor's Palace in the town plaza.

The Communication Officer was Lt. B. C. Allen (as I recall). He was mostly a figurehead. Communications were run by the CRM in charge, Earl Pinkham, who ruled his domain with an iron hand. When I reported for duty he was looking for someone to put at the head of his list, and I was it! I wasn't the fastest operator at that time - just a run of the mill tin-can radioman. I had to scratch to copy the NPO BARDS (Sec-State PRESS news) and WCX PRESS, which would run around 35 WPM, with lots of QSB. I would have to rewrite the stuff after I finished because of lots of strikeovers, etc. This would drive Pinkham crazy. Goddam, you should be able to copy it right the first time! So I was on his list for a couple or three months until the next transport came in with a couple or three new radiomen. Those guys were so much worse than me that Pinkham took me completely off his list and made me a fair-haired boy - and I started enjoying that good duty at NPN. I don't think there were a hundred active duty Navy there then. We got $1.95 a day subsistence and this was more than enough for Marge and I to live on. Rent $15/mo; electricity $1/mo; ice $4/mo; commissary $30/mo (as I remember it). Even after paying Marge's fare out on the PRESIDENT COOLIDGE we were able to save $1000 during the two year tour there.

We enjoyed the life there. Hiking, Biking, Swimming. Free Movies every night at the service club. Dances every Saturday night. Scotch and bourbon $1.50 a fifth. We paid our housegirl $15 a month to clean the house, wash the dishes and our clothes and go out to her ranch for chickens at 15-25 cents each.

I'll never forget the family which lived in a little tin-roofed shack in back of us. He had the only taxi in Agana, as I recall. I think his name was Camacho. He had several kids running around in back, one of which was a little boy who wore only a little T-shirt, with his essentials hanging out. Well, this kid ended up as Governor of Guam after the war! And a real good governor I heard.

With Pinkham as RinC, there was Arthur B. Carter CRM as Material Chief and Waskey RM2 as his assistant. Some of the first ops were A. R. McClane RM1, Jesse Lyons RM1, Carl Sawyer RM1, Alan Parmenter RM1. Some of the second ops were myself, Tommy Blackwell RM2, Red Smith RM2, Red Young RM2, George Ray Tweed RM2.

Tweed was the "Ghost of Guam," the title of his book written after he was picked
Personal recollections of Harold M. Winters, LCDR USN (Ret) (continued):

up at war's end, having eluded the Japs all that time thanks to the native Chamorros. I heard Tweed had a TV shop in Oregon somewhere but I never cared to find out.

Joe Young relieved Pinkham as the Chief in Charge sometime before I returned to the States. A Chief named Myers relieved Carter as Material Chief. I had applied for a six months extension but it was disapproved - chronic bronchitis. It was a good thing it was not approved, because usually if you got one extension, you'd usually get a second one, and I'd have been a POW.

We had a Model TAF transmitter which was used on the "five point" circuit with NPO - Cavite, F5Q - CinC Asiatic Fleet, NPJ - Shanghai and NPP - Peking. We had a Model TAB transmitter used on 355 and 500 kHz and 113 kHz for weather broadcasts and a Model TBK transmitter which wasn't used by anyone except Jesse Lyons on 20 meter ham work on the mid watch. He was the only one who knew how to tune the new fangled transmitter. We also had a homebrew transmitter for local work on 355 kHz. I think it had pair of ten tubes in push-pull oscillator, but I am not sure. It sounded like a rock crusher.

* * * * * * * * * * *

(Ed. Note: The existence of the "five point" circuit was confirmed by William H. Meadors, who was stationed at NPJ - Shanghai in 1934. He states that the frequencies used on the circuit were: 4125, 8250 and 16500 kHz).

* * * * * * * * * * *

(Ed. Note: The "five point" circuit was further confirmed by T. Earl Owens, CRE USN (Ret):

"I left the PENSACOLA in October 1940 and went to the Asiatics and aboard the USS AUGUSTA as a member of the CinCAF staff. The five point CW circuit was the fastest CW circuit in the Navy. Commander Fernall, Flag Communication Officer, allowed only six CW operators to be listed as qualified on the staff at any one time no matter how many good operators were on board. Four were for regular port and starboard watches with two in standby. If you made an error in operating, it was inexcusable. The operator would relinquish his assignment to one of the standby operators and then would have to prove his qualifications again. It was top honor for a CW operator to be on the regular watch list of the five point circuit. It consisted of: CinCAF Flag - F5Q, Cavite - NPO, Com 16 ND, Guam - NPN, Tsingtao - NPP and 4th Marines in Shanghai. One night in December 1940 the AC power went off to the radio receivers due to a fire on board. They had a priority message for the 4th Marine Commandant in Shanghai that just had to go. Mudge RML had the watch about midnight. The message was coded into 60 five letter groups. Mudge sent the message blind without having benefit of listening to his outgoing signals. He sent it with a speed key. He was more confident with the speed key than with a hand key. The 4th Marine operator sent a receipt for the message immediately via NPO Cavite which relayed it to the Augusta signalman by blinker light. After Commander Fernall was satisfied beyond all reasonable doubt that Mudge had accomplished this without listening to his outgoing signal, he had a letter of commendation prepared citing both operators for outstanding performance of duty. Commander Fernall requisitioned two 14kt gold plated vibroplex speed keys and awarded each operator with one. Commander Fernall made Captain later."

* * * * * * * * * * 

APPENDIX X-12
Personal recollections of Carl E. Sawyer:

While I was in Guam we experienced a devastating hurricane, or typhoon, with winds of 110 MPH and a barometer reading of 28.20 inches. The damage to the Naval Station was $365,500. Damage to private property was $1,200,000. 75% of the population were homeless. The power was off for three days or more. At the radio station we lost our antenna farm. Our building had a high ceiling and we didn't lose the roof so we rigged a jury antenna inside and kept up communications. Our old diesel engine emergency generator held up except for one hour when the water supply cooler got clogged by storm debris. I am enclosing some pictures taken after the storm. (SEE APPENDIX C).

I am also enclosing a copy of a "Guam Diary" written by one of the Navy Nurses who was captured by the Japanese, along with all of the other Navy personnel, and taken to Japan as prisoners of war. The nurses were repatriated in 1942 and sent back to the U. S. on the Swedish liner GRIPSHOLM. (SEE APPENDIX F).

Here is one little note on Guam morality: When the transports stopped at Guam, Asia bound, the Marines rounded up the dozen or so girls of ill fame and put them in jail until the transports left. Evidently this was to keep the girls pure from contact with those nasty sailors and prevent more contamination of the locals.

My family and I left Guam on the CHAUMONT December 1, 1940, before the invasion. I lost a bunch of shipmates in that one. I read that Chief Yeoman Blaha was shot and bayoneted. I later heard that the Japs patched him up and took him to Japan and that he got back to the States OK. I also read that Tweed and Tyson, Aerographer Jones and Machinists Mate Krump escaped into the jungle. All but Tweed were caught and executed. As you know, Tweed was rescued when we took Guam back.

I spent most of the war aboard the PHILADELPHIA, most of the time, with CONCILIANT. Was two years on North Atlantic convoy duty. Was in the invasions of North Africa, Sicily and Italy including Anzio and Salerno. I didn't receive a scratch but I believe the gunfire and near misses did something to my hearing.

After Europe I had shore duty at ComSix, Charleston, S.C. After the war ended, I started out to the Bikini bomb test but was sidetracked at Guam due to the shortage of communicators caused by sending short timers back for delayed discharges, etc. They pulled all of the RM people they could get away from the Bikini drafts.

Guam was a mess, practically a watch and watch situation. A lot of unnecessary circuits hadn't been secured and the major circuits were MUX or hand operated. Commander Classman, a telephone wire man, was sent out to install the old Western Union package units for tape relay to NRM and major island circuits. The commander knew his business. He rolled up his sleeves and grabbed a tool kit and with some ET's who were left behind, hooked it up.

There was one first class and myself, the only ones who had ever worked tape relay. My COMSIX experience really paid off. We had school and, after a short test run with NRM, started unloading. If I remember correctly, they had deferred traffic nearly a month old piled up in baskets. Then there came a flood of stuff from the news people in Bikini. We hung those tapes on racks like a Christmas tree and sent them when and if a lull happened.

I hand a bouquet to the transmitter and receiver people. When we got the four channel SSB going to NRM those receiver men monitored it very closely and sometimes shifted frequencies to us between messages and we never knew just when it happened. Other times communication was pretty iffy. Sometimes we would have a basket of 'ryryry' a mile high.

APPENDIX X-13
Personal recollections of Carl E. Sawyer (continued):

I went into the Fleet Reserve with 22 years service then was recalled for the Korean war. They sent me to Pensacola for a couple more years. I had approximately 15 years of Civil Service at Treasure Island. I lumped the whole together and retired under Civil Service at approximately 40 years service in 1965.

I suppose you remember some of the folks at NFG? Bob Steele, Chung Carroll, Lt. A. R. McClane, who was first class at Guam before the war. Later, after the war, he was CinC at NFG and then at NM and even later had the transmitter station at Dixon. I remember Chung Carroll would sometimes get so exasperated that he would take off for the Westward Ho and get a couple of tranquilizers!

*************************

Personal recollections of Joseph R. Young, LT USN (Ret):

All of my records and notes were destroyed by the Japs when they took over Guam. Things that happened back in those days are becoming pretty dim but I'll give you what little I can remember:

I was on ComBatShips in 1933 and went from there to the Radio Material School in December 1933. Then I went back to ComBatShips where I stayed until late in 1934 or early in 1935. I was then transferred to American Samoa - NFO. That was a beautiful spot but a "slave station" for radiomen. We had two days on watch and two days off but on our days off we came back to the station and worked - Sundays and holidays included. Several of the personnel (I was the only radioman) took the Chief's exam but about that time the shipping strike came along and we never got to send in the papers until the strike was over - six months. The Bureau came back with a nice letter to the Commandant saying they appreciated our efforts but the lists were already made up and we could try again next year.

From Samoa I was transferred to ComBaseFor - C5Y - on the ARGONNE. I took the Chief's exam again but hadn't studied so never made much of an effort. The Fleet went on maneuvers to Honolulu. Of course radio silence was in effect, but a couple of days out of San Pedro here comes a coded message rating me Chief. I'll never know who was my friend back in the Bureau but whoever he was, he was a good one!

During the stay in Hawaii, I was transferred to Commander Cruisers in the CHICAGO. I don't recall the call sign. As Flag Chief I had very good duty but we were gone from home so much that when the chance came to go to Guam I took it. I believe that was in 1939.

Guam was like most Asiatic duty. Lots of drinking and not too much work. We manned one circuit and copied schedules from NM. About all of our communications were with the AUGUSTA - CINCAF - who commanded things in Asia, with a few messages from NM.

Right from the first we were quite well aware that Guam would be a primary target in case of war. All of the dependents were sent home in June 1941. What little preparations we could make were completed but in the end none of them were carried out.

On December 1, 1941, the Commandant received a Top Secret message ordering him to destroy all classified material, which was done the same day. The next day we started getting messages from the same source in codes that, of course, couldn't be read because everything had already been destroyed. I have always wondered what those messages contained.

APPENDIX X-14
Personal recollections of Joseph R. Young, LT USN (Ret) (continued):

Guam was a pleasant place to do duty. There were about three softball teams that played at least once a week. Three good swimming beaches with a station bus running to the best one every afternoon. There was a good service club with dances at least twice a month.

When the Japs came in they landed 8,000 troops on the Island between dark and daylight. I don't know what they expected. The Marines had only 75 rifles and the native militia had a few old Springfields and one old BAR but I don't think they had any ammunition. The station was surrendered by a Chief Boatswains Mate. They kept him in charge saying that as long as he surrendered the station he must be the man in charge.

Tweed, RM, left sometime on the day before the invasion. He told no one he was going and made no effort to carry out his assigned duties. On the morning the Japs landed on the Island, I had sent all the crew away and told them to keep out of sight until they saw what was happening and then to use their own judgement on what to do. I planned to stay there at the station until there was no more chance of communicating but about half an hour before the Japs arrived, Alan Parmenter came back into the station. He said he was worried about what I was doing. Needless to say, he was real welcome! Joe Blaha, Chief Yeoman, came back in and then decided to go over to the Commandant's Office. He was shot and bayoneted as he left the station but I heard that they took him over to the hospital and the Japs patched him up and he lived and came back to the States. He died several years after the war.

When they machine-gunned Blaha, Parmenter and I decided it was time to leave so we went out the back door and into the brush. We stayed out five days until we finally got the word that they weren't executing prisoners, then we came back in and surrendered.

On 10 January 1942 we were loaded on a large Japanese passenger ship, the Argentina Maru, and taken to Japan. We arrived on the 14th and were put in the Zentsuji POW camp. This was a propaganda camp. As a result the treatment was about as good as the Japs knew how to give. We even had food on most days. On 9 June, quite a few of the Guam bunch were sent up to Kobe where small groups were sent to work on the docks.

On the 2nd of September a dozen of us were transferred to Kawasaki which was a POW work camp. We went to work on the railroad loading and unloading freight. It wasn't too bad a job because we could steal enough on most days to supplement our camp food. We also managed to get considerable news from the Jap coolies we worked with. Whenever the Japs celebrated a big victory like the sinking of the USS SARATOGA, we Americans were loaded up and sent to the steel mills for a week or so. I'm not sure just how many times the SARATOGA was sunk but our punishment was always the same. A dozen of us Americans remained in Kawasaki until the end of the war. We survived the fire bombings - two of them - and several other bombings.

At the end of the war we had quite a time getting any ship to send a boat in for us. One finally did and took us out to a hospital ship. There they sprayed us with DDT and put us on board the USS OZARK which took us to the airport where we got a plane to Guam. Mind you, we had had no food in all this time! In Guam no one seemed inclined to feed us until the Salvation Army got hold of our plight and got us into a mess hall. We had no money. The Red Cross charged for everything they had, so again it was the Salvation Army that got us a couple of packs of cigarettes and some donuts and coffee, which was all we got before we got back to San Francisco. No welcoming committee in Frisco - no transportation. The pilot of our plane finally got hold of someone at Oak Knoll Hospital and they sent an old school bus for us. At the hospital they fed us cold hot dogs and cold boiled potatoes and gave us a place to sleep. After a couple of
Personal recollections of Joseph R. Young, LT USN (Ret) (continued):

days someone in authority started caring for us. They got us some money for uniforms and eventually sent us to hospitals near our home towns. Quite a homecoming!

Getting back to Guam. As I said, life there was easy. We had plenty of watch standers so each man got about two day watches and two night watches a week. The rest of the time you were on your own. Our communication officer wasn’t what you would call reliable so I was around most days and at least twice a night. We had a CRM and a first class who did the material work and took care of things around the station. A native kept the place swept down. In other words, it was very pleasant duty.

Here is a list of the radiomen at Guam in 1941. There were a bunch more but they were attached to the Security Group and we never mentioned them while we were prisoners:

Young CRM, Myers CRM, Tweed RM1, Gordy RM1, Kellogg RM1, Miller RM1, Musselwhite RM2, McCune RM1, Smith RM1, Parmenter RM1, Ed. Young RM1, Cramer RM1, Walker EM1, Blaha CY and Lt. Madsen, Communication Officer. (SEE APPENDIX C - Personnel Lists).

I was the CRM in charge. Myers was the Material Chief. Tweed and Walker were in the material crew.

Right now, as far as I know, Gordy, Kellogg, Parmenter, Blaha and Lt. Madsen are all dead. Kellogg died in prison camp from a ruptured appendix. Myers went back to Japan and married a Japanese girl, brought her back to the States, put her through school then went back with her to Japan.

* * * * * * * * * * * * * * *

APPENDIX X-16
Guam is a fast-growing tourist area.

AGANA, Guam — This is the year that the population of Guam, a 212-square-mile mountain-top island sitting atop the Equator on the far side of the International Date Line in the Pacific, will top 100,000 people for the first time. There will be more than 300,000 visitors, and tourist spending will be more than $100 million.

Guam was practically blasted out of existence in World War II, its people imprisoned and scattered, its agriculture ruined, and most of its buildings leveled. Today, it is a bustling, cosmopolitan community where the gross national product in each of the last six years has soared by 30 percent.

With the growth in hotel rooms as well there has also been a corresponding build-up in associated facilities for visitors and tourists. Nearly 100 different restaurants now serve everything from German pancakes to Mongolian barbecue. The local McDonald hamburger stand is the largest in the world, and the costs in duty-free shops are extremely low for such things as cameras, stereo equipment, liquor and jewelry.

As the largest land mass between Hawaii and the Philippines in the Pacific, Guam is the only U.S. possession in Asia. It was ceded to the United States by Spain at the end of the Spanish-American War at the end of the last century. Maintained as a strategic U.S. Navy base, with few outsiders allowed to visit, it was captured by the Japanese early in World War II — the only inhabited U.S. possession to be occupied by the enemy — but was retaken by American forces in mid-1944. In 1950, Guam was given the status of an unincorporated U.S. territory, including American citizenship for the people.

Built at least 60 million years ago when two underwater volcanoes erupted out of the ocean to build a new island, Guam is one of the fastest-growing tourist areas in the world.

One big reason is its unending summer, a climate where year-round trade winds make it never too hot or too cold. Spectacular scenery is all around the island, which is circled by a fine 50-mile-long paved highway, and there are many picturesque villages and historical settings, along with still-virgin areas of jungle so dense that a Japanese wartime straggler was only recently found there after a 27-year-long hideout.

He may not have been alone in the jungle, either. Sightings of other stragglers have been reported several times already this year.

From the Vista, California, MORNING PRESS
provided by Mr. and Mrs. Carl J. Williams.