

Incredible Radio Tales

When radio officers hit the beach in San Francisco they went immediately to the "Dog House", a boarding house in Powell St. that for reasons lost to time was the favorite home away from home for seafaring brass pounders. There were probably similar places in every major port in the country if not the world. And what must the sparkies have spoken about at table? Why radio, radiomen, radio conditions and radio equipment of course!

Ah! What one wouldn't give to sit in on one of those bull sessions now. These were the men who could coax a sweet note from from a decrepit quenched gap transmitter, copy through static and interference and look the Radio Inspector right in the eye when he strode self importantly into the shack.

Our time machine is out of service at the moment due to a blown power transformer. So we won't be able to join the boys at the Dog House tonight. But we can record and preserve some of our own radio tales, all of them true, for your enjoyment. As you read, let the sounds of static on 600m at midnight and the sight of glowing tubes in a dark room become real. Imagine the silence and the smell the dust in an abandoned transmitter gallery. And above all remember the radio men and women who came before us and made the profession one of honor and skill.

-...-

Jeffrey Herman was a radioman in the US Coast Guard, stationed at NMO in Hawaii. This was in the days when the Coast Guard stations stood watch on Morse circuits in every band and selected operators proudly displayed their speed key certificates.

Most ops avoided the 500kc position but Jeffrey loved it, especially at night. Read his first hand reports below and find out what it was like to listen to every rustle and squeak across the Pacific... and what it was like to receive a real SOS.

Part 1 - Jeffrey introduces us to NMO and its radio operations.

Part 2 - A description of the 500kc operating position - Jeffrey's favorite.

Part 3 - Jeffery describes the magic of 500kc at night - and the irreverence of some operators!

Part 4 - Information about proper procedures to be followed on 500kc for everything from the silent period to a SOS.

Part 5 - A Russian lid is encountered on 500kc by Jeffrey at NMO - and by operators across the Pacific.

Part 6 - Jeffrey receives his first SOS. The fate of the ship was not a happy one.

Part 7 - A one hour extract from the 500kc log of NMO.

If you would like to contact Jeffrey Herman directly click [HERE](#) to send him an email message.

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One of the most famous transmitters at the KPH transmitting site in Bolinas, CA carried the designation BL-10. When you serviced this sleek 40kW beauty you walked into it like a room. Its voice was heard across the Pacific on 500kc and 426kc. We knew that BL-10 was out of service. But what of the transmitter itself? Was it still there? Might it speak once again? We had to find out...

BL-10 Is Dead - Explore an abandoned transmitter building in search of BL-10 - by Dick Dillman

-...-

Warren Reese "TR", transmitter technician at KPH, was conducting a tour of the station. Of course this included the most historic building on the site, Building 1, where Marconi operations began at the site in 1913 and the current home of transmitter BL-10. But while the tour was in progress someone locked the door from the outside! What to do? TR never hesitated. Read about his creative solution to the problem.

Trapped in Building 1 - With a 10kW intercom - by Warren Reese



After providing reliable communications for most of this century commercial Morse code was officially laid to rest in North America in 1999. The final messages were sent from the Globe Wireless master station south of San Francisco. Read what it was like to be there on that final, emotional day.

The End of Morse - The day the keys in North America fell silent - by Dick Dillman



The tall poles and the wire antennas at KPH were kept aloft by a special breed of man: the rigger. One of these was Jim "Jimmy" Bourne. Here is a remembrance of a Chief Rigger at KPH.

A Rigger's Rigger - A story of Jimmy Bourne and the message on his climbing belt - by Dick Dillman

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Reports From NMO

Subject: 500 kc - Part 1

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The following series is for the historical record. We are witnessing a never-to-return era of communications style and format that was so perfect that nothing will ever be its equal. I am very glad that I was able to be a part of it, if only for three years.

US Coast Guard Radio Station Honolulu (Callsign: NMO)

In July of 1977, as a 3rd Class Radioman Petty Officer for the U.S. Coast Guard, I received orders to report from Coast Guard Group Monterey, CA, to Coast Guard Radio Station Honolulu in Wahiawa, Hawaii. I had graduated

from Radioman School a year earlier concluding 5 months of training in code, propagation, radio fundamentals, ITU procedures, and other such things. 22 words per minute was the minimum code speed needed to graduate; mine was 25.

Radio Honolulu, NMO, is situated on a huge plot of land owned by the Navy, centered in the pineapple fields of Oahu. In addition to NMO, the Navy and the Marine Corps had their Central Pacific Communications command there also. By the way, NMO has the longest overwater microwave link in the world: Oahu to the island of Kauai (for VHF marine band ops).

NMO was set up with the following glass-enclosed operating positions: 500kc CW, HF CW, HF and VHF voice, air-to-ground, RTTY, Fleet Broadcast, landline TTY, and the Chief's desk. From where the Chief RM sat he could watch all of the ops to make sure no one fell asleep; woe to the operator (op) who was caught sleeping while on watch!

The Coast Guard is the only military service that communicates directly with the public. Thus we had to know when to turn off the military radio jargon, in particular on 2182 kc (MF international voice calling and distress freq) and ch. 16 / 156.80 Mc (VHF international voice c & d freq). The voice op was kept busy monitoring over a dozen voice channels: 2182 kc, the 4, 6, 8, 12, and 16 Mc high-seas SSB ship to shore freqs, four VHF repeaters for ch. 16 (NMO had a repeater on Kauai [the above microwave link], Oahu, Maui, and the Big Island, four repeaters for VHF ch. 23, and whatever else the Chief felt needed to be listed to.

Several times each radio day the voice op had to make broadcasts (WX, Notice To Mariners, etc) on all these frequencies (the timing was critical so the clock had to be checked frequently).

The HF CW position required 2 ops with two racks each consisting of four Collins 651S digital readout receivers scanning the CW calling bands on 4, 6, 8, 12, 16, and 22 Mc. Daytime hours one op would take 8 and 12 - the other operator would take 16 and 22; night time one had 4 and 6 - the other would have 8 and 12. So, an operator might have 8 Mc scanning in his left ear and 12 Mc scanning in his right (the rcvrs automatically scanned a preset band of freqs, for example the 8 Mc calling band for ships calling shore stations runs from 8360.4 to 8374 kc).

A ship calling us might have to send our callsign 20-30 times (no 3X3 format here!) while our rcvr scanned - then the NMO op would hear, from the highest

to lowest to highest notes possible (within 1-2 seconds) our callsign being sent; he would quickly shut off the scanner, tune in the ship and turn off our CQ tape (when no traffic is being passed we'd keep the transmitters busy sending: CQ CQ CQ DE NMO NMO NMO QRU QRU IMI OBS AMVER QSS 4 6 8 12 16 22 MHZ AR - sort of an advertisement for traffic), and the exchange might go some thing like this:

DE NMO NMO DE KNFB OBS 8360 K KNFB DE NMO R UP UP EE EE

meaning the ship has a weather observation (every 6 hours starting at 00Z every ship worldwide takes an OBS and passes it, at no charge, to the closest shore station), and he wants me to listen for him on 8360 kc; he'll continue to listen to me on NMO's fixed xmtr freq. Notice the sig UP meaning 'I'm shifting up to that freq'.

An exchange ALWAYS ends with 'dit dit' (and hams thought they invented that!). The above was rare, for during the obs hour not just one ship would call but dozens and dozens would be calling (in both ears with the rcvrs scanning!) so the NMO operator would have to line them up numerically:

KNFB DE NMO UR NR 1 R 8360 TU WSLH UR 2 R 12561 TKS 7XYM UR NR 3 DE 7XYM 8370 R UP ... JGFD UR 25 OK UP 8375 TU

then the op would copy the WX obs from each ship one by one. After working that group of 25 ships he'd turn on the CQ tape again and scanners, and dozens more ships would pounce on him. Since WX is time-sensitive it was a race to 'collect' as many OBS as humanly possible; a lazy op might only get 100 during the 30-45 minute period.

End of Part 1.

The remaining parts will be devoted entirely to 500 kc.

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Reports From NMO

Subject: 500 kc - Part 2

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MF CW at NMO

Sitting adjacent to the HF CW position was a smaller room, enclosed on three sides in brick painted off-white. The fourth side was glass, including a sliding glass door, with a small sign glued on which simply said ``MF CW".

This little booth of modest appearance was well out of proportion with respect to the role MF CW had played in the history of maritime communications. Also, though I'm sure not by accident, the Chief's desk was positioned so he had a direct view of the MF CW booth. The Chief's position had a compliment of Collins rcvs, and one was ALWAYS set on 500kc. More often than not I'd get a glimpse of the duty Chief listening, with a gleam in his eye, to the evening traffic on 500.

Upon entering the MF position one was struck with the sight of the largest 24 hour clock known to mankind. It had the most unusual red markings on its face. Two red wedges, starting from the center and flaring outward covered, respectively, minutes :15 to :18, and minutes :45 to :48; these, of course, were blatant reminder to the op of the two worldwide silent periods (more one these later). In addition, each of the twelve five-second intervals around the perimeter had the first four seconds blocks marked in red with the last second left white: 4 seconds red, 1 second white, 4 seconds red, 1 second white, etc., around the entire circumference.

Now, these markings were to aid the 500kc op in manually sending the distress auto alarm: key down 4 seconds, key up 1 second, key down 4 seconds, key up 1 second, etc., for one minute (more on the auto alarm later).

One's attention would next be drawn to two Collins 651S rcvrs mounted in the op's console. The top rcvr was locked on 500.000 kc and the bottom was usually a few hundred cps on either side of 500, say 499.500 kc. This, of course, prevented missing signals with which our rcvrs were zero-beat. The audio from these two receivers was fed into a 12 track reel-to-reel tape recorder, as were all rcvrs and xmtrs at the station; one track was reserved for WWVH time signals. A second 12 track tape recorder acted as a back-up to the first. Reels were changed at the beginning of each new radio day (0000Z).

On a panel next to the two Collins rcvrs was a telephone-type rotary dial with 4 red lights above it. If digit 1 was dialed, the first red light would be lit, indicating our MF xmtr was on 500 kc in the A1 mode; if digit 2 was dialed,

the second red light would be lit, indicating the xmtr was on 500 kc in the A2, or MCW (modulated CW), mode (more on A2 later); dialing digit 3 shifted the xmtr to 440 kc, in A1, where 440 kc was NMO's working frequency; dialing digit 4 shifted the xmtr to 512 kc, A1 (more on 512 later). I'm not sure if this was against FCC or ITU regulations, but our 500kc xmtr was ALWAYS set to the A2/MCW mode when I was at the key; I hope there is a statute of limitations concerning this possible violation! I loved the musical notes A2 produced.

Note that our transmitter site was at least 5 miles away, on the 4000 ft peak of the Koolau Mountains. Thus we enjoyed full duplex transmission. At a right angle to the op's desk was a typewriter containing the MF CW radio log. During radioman school we were instructed to attempt to log every signal we heard on 500 (an impossible feat), but at worst, make an entry every 5 minutes (ITU regs!). If no signals were heard within a 5 minute period (which would never happen at night) then one would enter:

```
NO SIGS 500 2308Z NO SIGS 500 2313Z BEGIN SILENT PERIOD 500
2315Z END SILENT PERIOD 500 2318Z KPH KPH KPH DE WNKL WNKL
AMVER 425 K / WNKL DE KPH R UP / UP / EE / EE 500 2320Z NO SIGS
500 2325Z
```

Thus, what ever we heard would be typed directly into the log.

At a right angle to the log typewriter was a second typewriter which was used to copy traffic from ships to NMO: OBS, AMVERS Dead Head Medicos (medical reports handled free-of-charge), and other non-commercial traffic. By U.S. law, Coast Guard stations cannot handle commercial traffic, for that would take revenue away from the commercial stations.

Sitting on the ops desk was a Vibroplex chrome-plated bug, and a cheap straight key screwed onto a thin sheet of plexiglass. I, of course, only used the straight key.

Shifts at NMO ran like this: 12 hours on 12 hours off 12 hours on 72 hours off. The day watch started at 0700 and ended at 1900 (local); night watch ran from 1900 to 0700 the next morning During my off hours I rebuilt an older wooden sailboat that doubled as my home; that enabled me to collect money from the CG for off-base housing... What a life, huh?

No one on my shift had any particular love for the 500 position ("`what fools!" I thought), so, even though we were supposed to rotate positions every 3 hours, I

volunteered to remain at the 500 position for the full 12 hours shift (especially during the night watches); I loved it! It was at this modest console that I would spend the next three years of my life. The things that I copied would, at times, amaze me, cause me laugh so hard I would fall out of my chair, or cause me to break down weeping.

To this day I cannot forget the ship's op whom I was working a distress with - how he stayed at his key while his ship broke up in heavy seas - how his transmitter emitted a scream at the moment the ocean flooded his radio room shorting the batteries and radios...

End of Part 2.

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Reports From NMO

Subject: 500 kc - Part 3

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Why 500 kc/600 meters? I have researched the literature in order to find an answer to this question, but have found nothing. I tend to think that this particular wavelength, 600 meters, became the standard by accident rather than some body of policy-makers deciding that it was to become the worldwide calling & distress frequency.

Maybe the nature of early equipment might be the reason this wavelength became the standard; the length of the antenna on some early transmitters dictated the center frequency of their very broadband signal - given that the antenna would run the length of the ship might have a bearing on 600 meters became the international CW wavelength. Regardless of whether it was by accident or choice, what was handed down to us was a wavelength with excellent evening propagation.

Starting at about 2100 local 500 would come alive. Any ship or shore station within 3000-4000 miles could be heard by an excellent combination of ground wave and sky wave - nothing was missed within this radius! Shore stations of

more than 5000 miles were easily copied (Australia and New Zealand boomed in nightly). Daytime propagation consisted of only ground wave: 300-500 miles was the maximum range possible. Thus most daytime traffic was passed on the HF channels.

The idea of combining a distress frequency and a calling frequency was an excellent one - it insured no distress calls would be missed, and at the same time everyone knew where everyone else was at! No need searching various frequencies looking for a particular ship or shore- station. The result was a worldwide partyline; if you sent so much as a single dit everyone would hear it:

Ships operated on either a one-op or two-op schedule so our broadcasts coincided with these skeds. But shore stations had to remain on the air 24 hours a day. Late nights could become a bit of a bore for some shore ops, heavy eyelids and such. So out of boredom (or maybe by ``accident") a single dit would ring across the Pacific, only to be answered by another dit possibly several thousands of miles away. Then all hell would break loose: every shore station and any ships with an on-duty op would be sending dits! For several seconds 500 sounded like a machine gun - 100 or more carriers were ditting away. As quickly as it started it would fade away.

A variation of this was someone sending a single GE (good evening); of course it would be impolite not to respond in kind so someone else would answer with GE. Within a half second at least one hundred GE's would flood the frequency! My log entry would look like this:

GE / GE / GE / GE / GE / (OPNOTE: AT LEAST 100 GE'S SENT) 500 1123Z

Some Coasties were unhappy with their duty assignment (Alaska, or some LORAN station in the middle of the Pacific, or on board a patrol ship) and made their sentiments known to the world: one op would send an F, a second disgruntled Coast Guardsman would follow with a T, only to be followed by by a third CG op sending G - three Coasties seperated by 100's or 1000's of miles of water expressing their thoughts as one. The acronym FTG stood for a very common expression in the Guard: F___ The Guard. In the log it goes:

FTG 500 1305Z

Needless to say, the CO (commanding officer) ('The Old Man') of NMO, upon reviewing the log the following day, would attach a nasty note expressing his displeasure at seeing such entry in an Official U.S. Government Legal Document blah, blah, blah... The Chiefs on the other hand would give out a

hardy laugh and express their delight that this acronym was still traveling the airwaves.

After 2100 local there would be a steady stream of CW on 500 - ships calling shore stations or other ships:

KHK KHK KHK KHK KHK KHK KHK KHK KHK (making a pest of himself!) DE (in other words: `who the heck is calling me?') DE KNLS TR K KNLS DE KHK R UP 485 K OK 485/480 UP EE EE

Translation: The ship KNLS, ignoring the usual 3X3 callsign format instead was going to endlessly call the shore station KHK until he got some attention; KHK interrupted him with a simple DE after which KNLS told him he had a travel report (TR). KHK's answer was `Roger, I'll transmit on 485 kc' to which the ship answered `Okay, you transmit on 485 and I'll transmit on 480 - let's go up' (up in wavelength that is, not in frequency - traditions are hard to break!).

By the way, KHK was a shore station located on a beach here on Oahu. Or,

TTT TTT TTT CQ DE ZLD ZLD CYCLONE WARNING NR 15 QSW 428 AR (These types of broadcasts, prefaced with TTT or XXX, will be discussed in Part 4.)

Or,

CQ CQ CQ DE WNOP WNOP ANY ONE HV 2100Z SOUTH PACIFIC WX? K WNOP DE XSU GE WILL GIVE 2100 WX ON OUR 2200 BCST K OK TKS OM SU SEEU EE EE

and on and on throughout the night - very orderly. You'll note each series of transmissions end with a `dit dit' (recorded as EE); and amateur radio operators thought they invented this `prosign'!

Part 7 will contain an actual transcription of one of my evening logs.

Part 6 will describe a distress in which a ship broke up in heavy seas and all hands were lost - it will contain my QSO with the ship's operator up to the last second of his life.

End of Part 3.

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Reports From NMO

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Part 4. Procedures

The first thing an op coming on watch does is to check his clock against WWV (ITU regs!), for certain actions on 500 have to be timed down to the second. In the log it goes:

OBTAINED WWVH TIME TICK - CLOCK CORRECT 2500KC 0900Z

Because of the steady stream of signals on 500 a weak station sending a distress message might not be heard. And at one time, calls AND traffic were passed on 500 - there was no shifting to working frequencies to pass messages. Thus silent periods were created.

These consist of two three-minute intervals, in which worldwide no one transmits - volume controls are turned up - ears are pressed to the speaker grill - one's breath is held, from minute :15 to minute :18, and again from minute :45 to minute :48. Even traffic being passed on working frequencies would stop. For example, if I were sending the WX on 440kc:

"...HIGH PRESSURE 1028MB 35.8N 132.3W BT CQ CQ CQ DE NMO AS
SP QSY 500 AR"

at which point myself and my listening audience would shift back up to 500 for that particular 3 minutes. Woe to the station whose clock is off or who forgets the SP, for a half dozen stations might jump on him:

VLA VLA VLA DE 3FWR 3FWR K QRT SP SP SRI SP OK SRI SP SP

(the ship 3FWR calls the shore station VLA - someone breaks in to tell him to stop transmitting; he responds with `sorry' and is still scolded, says he's sorry a second time, and is scolded again), although someone somewhere in the Pacific was more direct and to the point:

JNKB JNKB DE FHWN FHWN SHUT UP SP (at 30 wpm)

Now, the last 15 seconds of a Silent Period was set aside for safety and urgent preliminary transmissions ("prelims"): Broadcasts From the lowest to the highest priority, the following types of broadcasts exist:

CQ - meaning ``Hello All Ships and Stations" sent in a 3X3 format:

CQ CQ CQ DE FUM FUM FUM WX AND TFC LIST QSW 430 AR

Here, the shore station FUM, French Navy Tahiti, makes an announcement that he'll be sending the weather and his traffic list on 430 kc. The CQ is the most common broadcast announcement; one will go out every few minutes from someone somewhere.

TTT - this is the prosign for a safety broadcast: storm warnings, navigation hazards, or anything involving the safety of shipping:

TTT TTT TTT CQ DE ZLW ZLW ZLW CYCLONE WARNING NR 38 QSW
475 UP

Each T is longer than usually sent to provide a very distinctive sound. During the last 15 seconds of a silent period a half dozen TTT's would be going out. In particular, the shore stations running around the perimeter of Australia would sent the same TTT, one station following the previous station. Everyone in the Pacific wanted to be the first one out with their TTT announcement instead of waiting for a station 1000 miles away to finish, so many time they'd all go out at once. What a mess!

XXX - this prosign is indicative of an urgent broadcast where shipping and lives might be in danger (the CO might order the auto alarm sent prior to the preliminary announcement on 500):

XXX XXX XXX CQ DE NMO NMO NMO HURRICANE WARNING QSW
440 AR

Again, each X is drawn out so as to provide a very distinctive sound. This, as with the TTT announcements, went out during the last 15 seconds of a silent period. Those sending a TTT were supposed to give way to an XXX (remember, everyone is working duplex or full QSK - you MUST be able to hear anyone sending under you).

SOS - the darkest hour of an ops career is when the Captain of the ship enters the radio shack, hands the op a piece of paper, and says ``Send the SOS - here's our position". International procedures dictate *every* step the operator will take:

Distress Procedures:

1. Auto Alarm (AA): twelve 4-second dashes, each dash followed by a one-second pause, sent in A2 (modulated CW). ITU regs demand that every ship carry an AA decoding receiver; this decoder will ONLY respond to AA's sent in A2. In A2 the transmitter is modulated by a tone (two meter repeaters ID in this manner). Thus, what you would hear on your receiver, with your BFO on would be several tones, or harmonics - very musical and an attention getter; a station sending CW in A2 sounds like someone sending code on a piano keyboard by pressing a half dozen keys at once! [One very old book in my collection describes an easy (but archaic) method of modulating a CW transmitter: a toothed wheel is rotated at several hundred RPM with a wiper, connected to the keying circuit of the xmtr, rubbing over the teeth of the wheel. Crude but effective.]

The AA will activate the decoder onboard every ship within receiving distance after just four correctly sent dashes are received; the decoders are designed to be a bit forgiving regarding the timing of the AA dash: they will accept, as a valid dash, a dash of between 3.5s and 6s in length (just in case the sending op is nervous!). As mentioned, only four correct dashes are needed, but just to be sure, ITU demands that twelve be sent. Once the AA decoder receives four dashes its latching relay closes activating lights and bells in the radio room, the radio officer's stateroom, and up on the bridge.

2. The op in distress now must wait two minutes (if possible - if his feet are getting wet then he skips this step) for off duty ops, on board other ships that have received his AA, to get to their radio rooms. 500 kc is now in a continuous silent period until the controlling station sends:

CQ CQ CQ DE (cs of controlling stn) QUM 500 KC VA Note that QUM

Meaning distress traffic has ended - resume normal traffic. The controlling station is the distressed vessel - he can and does give control to the first responding shore station; thus if I was the first shore stn to

respond, then NMO would be the controlling stn. Woe to ANY ship or shore station who transmits normal tfc during a distress:

9JBV 9JBV DE HCKO HCKO HW OM K QRT QRT QRT SOS 500
(sent by dozens of stations)

3. The distress broadcast. All traffic pertaining to the distress will be sent on 500. Those not in a position to assist will move to 512 kc, the alternate calling freq when 500 is in distress use. Here is a typical distress bcst (sent at no more than 16 wpm (ITU regs!)):

SOS SOS SOS CQ DE 5TER 5TER 5TER BT SOS 281751Z MV PANAMA
TRADER TAKING ON WATER ENGINE ROOM FLOODED POSN 13.73N
152.55W 13.73N 152.55W NEED IMMEDIATE ASSISTANCE AR MASTER
SOS

This broadcast would be followed by a 10 second long dash to aid receiving stations in getting a bearing to 5TER's position. Then would come the acknowledgements:

SOS 5TER 5TER DE NMO NMO NMO R R R

SOS SOS 5TER DE KFS KFS KFS R R R

SOS SOS 5TER 5TER 5TER DE JNA JNA JNA R R R

SOS SOS 5TER 5TER 5TER DE WNPH WNPH WNPH R R R SOS WE ARE
IN POSN 11.81N 151.32W CHANGING CSE TO UR POSN WILL GET ETA
K SOS

WNPH DE 5TER R TU HERE IS MORE INFO

The first thing you'll notice is that ALL transmissions MUST start with SOS (ITU regs!). What happened here is that three shore stns QSL'd the distress bcst - ITU regs state that you must send R R R SOS; a nearby ship also QSL'd and is proceeding to 5TER's posn.

The 500 op at NMO (me!) would be on the phone to RCC (Rescue Coordination Center) passing all info - RCC would launch aircraft and also key up the AMVER computer to check for nearby vessels. Suppose the AMVER computer shows that KPLH is steaming nearby:

SOS KPLH KPLH KPLH DE NMO NMO NMO

would be sent every 5 minutes both on 500kc and on all the HF freqs.

In case no ship responded to 5TER's distress call, 5TER might give control to NMO. We would then periodically send:

DDD SOS SOS SOS DDD CQ DE NMO NMO NMO BT

where the DDD indicates that NMO is relaying a distress.

Other Broadcasts I had mentioned that the last 15 seconds of the silent period were reserved for safety (TTT) and urgent (XXX) preliminary broadcasts. The problem was that 10 or 20 shore stations might have such a broadcast to put out and none of them knew who else would be a sending one - the result was sometimes a mess. To hear a dozen shore stations trying to send at once:

TTT TTT TTT CQ DE ...

was extremely funny! Thus, some would start a bit earlier than H:17:45 or H:47:45. I would start hearing

TTT TTT TTT CQ DE ...

sometimes as early as the last 30 seconds of an SP.

Now, EVERY shore station worked duplex and everyone wanted to be the first to get their broadcast out. The Japanese stations were always the most polite. I'd hear a New Zealand TTT and an Australia TTT and a Japanese TTT and the Japanese station would always stop his bcst to yield to the others. Once the freq was quiet then the Japanese station would start his TTT prelim again.

Oh, a prelim broadcast is the short announcement on 500 telling everyone to shift to one's working freq for the full bcst text:

XXX XXX XXX CQ DE VLA VLA VLA URGENT MARINE BCST MAN
OVERBOARD QSW 472 UP

is a prelim bcst. The Australian shore stations were a well-behaved unit (even though they might crush other countries trying to send prelims!). The following Aussie stations would take turns sending their prelims - as soon as one finished the next would start: VII, VIA, VIR, VID, VIS, VIT, VIM, VIB. The only New Zealand shore station I used to hear was: ZLZ.

Other South Pacific shore stations I heard nightly were: FJP - New Calidonia 3DP - Fiji Islands P2M - Papua New Guinea DUQ - Samoa 8BB - Indonesia VJZ - New Britain FUM - Tahiti (French Navy) XSU - can't remember - used to hear a lot of X__ shore stations, and ones from Korea, Philippines, China, Central and South America... North Pacific West Coast shore station that would boom in nightly included: NMQ - USCG Radio Long Beach CA NMC - USCG Radio San Francisco CA NOJ - USCG Radio Alaska KFS - San Fran commercial station KPH - another SF commercial station KHK - Honolulu commercial station KOK - Southern California commercial station.

To hams, 500 would have been a DX'ers dream but we took the excellent conditions for granted. Keep in mind that NMO had a *very* long a *very* long longwire receiving antenna (over one mile in length). Not only would there be pile ups at the end of a silent period, but also, at the top of each hour; that's when the low priority ``CQ CQ CQ DE ... WX AND TFC LIST QSW ... AR" type of prelims would go out.

So, not wanting to take a number and wait for others, prior to sending a prelim best I would always send: dit dit dit (or I E) (i.e. ...) as a way of saying ``Hey - don't anyone else send anything because I'm running 10 thousand Watts and in A2 and I'll crush you..." or something like that.

Seriously, if I had a safety or urgent to send at the end of an SP, as I was sending my TTT or XXX I'd hear other countries under me as they started their prelim and they would suddenly stop when they heard us; NMO must have put out a commanding signal to the entire Pacific for everyone to yield to us.

Generally, 500 was very orderly and everyone was a gentleman.

Frequency scheme: Ships had a choice of using any of the following working frequencies: 425, 454, 468, 480, and 512 kc. Shore stations only had one fixed working freq, so during an initial call on 500 a shore station would give his working freq and the ship would choose one of the above to get as close as possible (so as to work duplex):

3LF 3LF 3LF DE CKHB CKHB TR K CKHB DE 3LF GE QSW 471 K DE CKHB R 471/480 UP R UP EE EE

Here, the ship CKHB called the shore stn 3LF wanting to pass a travel report (TR); 3LF has a fixed working freq of 471 so the ship chose to use 480: 471/480 means ``you use 471 and I'll use 480". Why these particular choice of

frequencies? Note that 454 kc was the old 660 meter wavelength, 480 kc = 625 meters, and of course, our star frequency 500 kc = 600 meters.

Oh, if you haven't guessed, shore stations have 3 character call signs, and ships have 4 character calls. Many folks have shown their surprise that this kind of activity was occurring, on a worldwide scale, just below the broadcast band. But as a young pup I knew something was lurking just below the rock and roll band; living near NMQ (USCG Radio Long Beach, CA) I would occasionally hear an unusual on-and-off hissing sound which would get stronger the lower I tuned: sheeeesh shesh sheeeesh shesh sheeeesh sheeeesh shesh sheeeesh (NMQ sending their CQ - of course my AM table top tube radio didn't have a BFO). That prompted me to both study the code and take the cover off my AM radio to move to `down' to the source of this noise (boy did I ever ruin that radio; thank goodness my parents bought me a Heathkit shortwave receiver - with a BFO).

End of Part 4.

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Reports From NMO

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Part 5. A minor diplomatic incident.

One evening while sitting the 500kc watch and daydreaming of those lucky ops onboard their ships scattered about the Pacific my pleasant thoughts were shattered by a bcst from a Soviet ship:

```
TTT TTT TTT DE UBEX UBEX UBEX BT 170930Z ALL SHIPPING  
WITHIN 200 KM RADIUS 030-060 DEG FROM 37.42N 174.11E USE  
CAUTION DUE TO MISSILE TESTING DURING THE HOURS OF ...
```

Oh gad, he was going to send the entire text on 500 - that's a no-no for just a safety bcst. Okay, time to earn my pay as the Central Pacific 500kc cop - I'll

just break in by sending a couple: BT BT but he kept right on going. Okay, I'll hold my key down for a few seconds (but not too long for long dashes will activate auto alarms on board ships): ah, silence. I'll be nice:

UBEX DE NMO NMO GE OM PSE QRT ON 500 PSE QSY 512 OK IMI K

After a few seconds of silence he proceeded to send:

TTT TTT TTT CQ DE UBEX UBEX UBEX BT 170930Z ALL SHIPPING ...

Oh geez, this guy gets the Lid-Of-The-Night award. Now I'm not happy. The Cold War on 500. I send another: and silence results. Let's try it again:

UBEX DE NMO QRT ON 500 QSY 512 K

only to be followed by:

TTT TTT TTT CQ DE UBEX UBEX UBEX BT 170930Z ALL SHIPPING ...

Now, with only 30 seconds until the silent period my concern for his unlawful bcst is quickly growing. 15 seconds, 10 seconds, 5 sec.; my log:

BEGIN SILENT PERIOD 500 0945Z OPNOTE: UBEX CONTINUING TO SEND SAFETY BCST DURING SP. SPVR NTFD. 0945Z

Having told my supervisor, I proceeded to send:

QRT QRT SP SP

but the lid kept right on sending. Now my mates on the West Coast were losing their patience too - first up is NMC (San Fran CG):

UBEX DE NMC QRT SP SP

and he stops! But a few seconds later (still during the silent period):

TTT TTT TTT CQ DE UBEX

oh man, this nut's got seaweed for brains. In jumps NMQ (Long Beach CG):

DE NMQ QRT SP SP

and even NOJ up in Alaska jumps in the brawl:

DE NOJ QRT SP

followed by Power House:

DE KPH QRT SP SP

but the fellow kept right on sending his best. Finally at minute :47 (still within the silent period) he finished. I had logged everything; but one thing I didn't log was my 'QSL' to him after the silent period:

UBEX UR A LID

without my callsign, and in A1 (I always kept our 500 xmtr in A2, so with it in A1 no one would know it was me). So much for diplomacy with the Soviets...

For the most part every ship and shore station worldwide followed the international procedures. The discipline on 500 around the world was amazing. During Coast Guard Radioman school we were reminded that what was being taught to us were not Coast Guard nor US Government policies, but rather international rules set forth by the UN's ITU, and that every shipboard operator, spanning many decades, had been taught the exact procedures being presented to us. This instilled in us an unbroken chain of tradition with those ship's radio operators since the beginning, and all of us felt a deep respect toward 500 kc; there was a sense of mystery felt towards this frequency - very difficult to put into words.

End of Part 5.

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Reports From NMO

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In the following true narrative the ship's name and her callsign have been changed.

Part 6: My First SOS at NMO

As mentioned in an earlier Part 1, I always sat the 12 hour 500 kc night watch on my duty nights; I loved listening to the steady flow of calls from ships in far off waters. Even though we sat in the Central Pacific I would sometimes even copy a fluttery East Coast US shore station.

Throughout the night I would hear ghostly signals, just above the noise level, that would fade in and out from who knows where. We used a Beverage-type long wire that stretched over one mile in length, and NMO sat in a very electrically quiet region. We were able to copy any ship or shore station anywhere in the Pacific.

One evening, feeling a bit drowsy (0200 local!), I thought I was dreaming when I heard a long dash, a pause, another long dash, a pause, another long dash, a pause, Like an electric shock, adrenalin flooded through me at the speed of light - OH MY GOD - SOMEONE IS SENDING AN AUTO ALARM! My eyes shot to the clock to time the dashes: 4 seconds on, 1 second off, 4 seconds on, 1 second off - those 12 long dashes almost froze me. I yelled into the intercom to the chief `Auto Alarm on 500' knowing at the same time alarm bells were ringing on board every ship scattered around the Pacific within radio range of the distressed ship.

Recall that when a shipboard operator goes off watch, ITU rules dictate he leaves a receiver tuned to 500 kc with a decoder attached - if that decoder hears at least four 4-second dashes each with 1-second separation, relays in the decoder will clamp shut triggering alarm bells in the radio room, in the radio officer's sleeping quarters, and up on the bridge, to warn of a distress message about to be sent on 500 kc.

Now, the two-tone AA used on the voice SSB MF distress/calling freq of 2182 kc was common: Mexican fishing crews used them when they were drunk. But AA's on 500 kc are **never** sent except when a ship is in distress.

This was the first one I'd heard since my radioman school days; I can't put into words the terror I felt while sitting out the ITU-required 2 minute wait (recall that the ITU dictates every step the distressed vessel's radio officer takes: Auto Alarm, then the 2-minute wait [if possible] for off- duty ops on other ships,

woken by their Auto Alarm receivers, to race to their radio shacks to copy the distress).

500 kc was now in an extended silent period. Someone started tuning up and was immediately pounced on by myself:

QRT SOS

was all I needed to send - dead silence.

One of the Australian shore stations was sending a CQ at the same time the AA went out - he must have heard the AA through his CQ for he stopped in mid broadcast. Nothing but an occasional static crash - dead silence. Throughout my brief 500kc career there had never been a silence like this I thought. Then it came:

SOS SOS SOS CQ DE DJNK DJNK DJNK SOS BT MV PANAMA TRADER
HULL CRACKED IN HEAVY SEAS MAJOR FLOODING 42-27N 42-27N
178-51W 178-51W NOW ABANDONING SHIP SOS BT MASTER AR K

Then came the 10 second-long dash (ITU: for direction finding). I was first - in A2 I sent:

SOS DJNK DJND DJNK DE NMO NMO NMO RRR SOS

and after me 500 kc was flooded with ships and shore stations sending sending the ITU response:

SOS DJNK DJNK DJNK DE NMC NMC NMC RRR SOS (San Francisco)

SOS DJNK DJNK DJNK DE NOJ NOJ NOJ RRR SOS (Alaska)

SOS DJNK DJNK DJNK DE NMQ NMQ NMQ RRR SOS (Long Beach, CA)

SOS DJNK DJNK DJNK DE KPH KPH KPH RRR SOS (San Fran.)

along with KFS in California, NRV in Guam, a couple Japan shore stations; the radio operator aboard DJNK must have breathed a sigh of relief and taken some comfort knowing his message was heard by so many.

Once the RRR SOS replies ceased NMO took control; I asked the standard questions for situations such as this:

SOS DJNK DE NMO BT NEED FOLLOWING INFO NR OF POB (number of persons on board) CSE (course) HULL ES SS COLOR (hull and superstructure colors) NR OF BOATS (number of lifeboats) BOAT RADIO FREQS, EPIRB WX, WIND SPD ES DIR, SWELL HT ES DIRECTION, CURRENT (weather and sea data) BT SOS K

and DJNK patiently answered each.

After getting these important answers I had the uncomfortable task of asking:

SOS DJNK DE NMO BT OM PSE CL KEY BEFORE U LV OK? K

SOS NMO DE DJNK WILL DO OM

Every shipboard telegraph key has a switch which, when closed, will continuously cause the ship's radio to transmit. This enables rescue aircraft to home in on the distressed vessel using their direction finding equipment. I had asked the op to close his key switch before he leaves the ship.

At the same time our AMVER computer was generating a printout of the locations of ships transiting the North Pacific: No ships were in DJNK's area! At least no AMVER reporting ships; it's possible there was a ship close to DJNK that wasn't sending us his AMVER position reports. A very slim possibility but a chance we couldn't ignore.

I was ordered by our Rescue Center to send the DDD SOS, i.e. to relay DJNK's distress message from our 10 kW transmitter. In A2 I sent:

AUTO ALARM (12 four second dashes with a one second pauses) then with my hand shaking, clenching the key: DDD SOS SOS SOS DDD CQ DE NMO NMO NMO SOS BT (DJNK's message) BT ANY SHIPS IN AREA DIVERT AND ASSIST SIGNED US COAST GUARD AR DDD SOS K

Dead silence reigned for minutes that seemed like hours. An awful, awful feeling of helplessness overcame me as I sat in that chair with the entire NMO crew standing in silence - all of us knowing at that very moment men were perishing in an icy ocean... Already we had aircraft in the air heading to DJNK's position so I notified him:

SOS DJNK DJNK DE NMO NMO BT USCG AIRCRAFT LAUNCHED TO UR POSN ETA 3 HRS BT HOWS UR COND? K

SOS NMO DE DJNK HV TO LEAVE SHIP NOW TU OM FER

His transmitter had emitted a - a scream - it actually screamed! I turned to the Chief asking "Is that...?" "Yes, the ocean water just flooded his radio room shorting out his transmitter and batteries." I couldn't accept this - the man at that key couldn't have just perished! I sent:

SOS DJNK DE NMO SOS DJNK DJNK DE NMO

At this point the Chief put his hand on my shoulder and only said "He can't answer you - he's gone." Throughout the night at 15 minute intervals I continued to send the Auto Alarm and the DDD SOS to no avail.

At daybreak our aircraft reported seeing only debris: bales of hay, which was the cargo of DJNK; no lifeboats, no bodies, only debris. Even to this day I sometimes hear, in my sleep, the scream DJNK's transmitter emitted that terrifying and horrible night. I pray the crew of that ship rest in peace.

End of Part 6.

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500kc - Part 7: A Typical Night

This part differs from the previous in that what follows will be an actual log of signals copied during a typical one hour.

During our training at Coast Guard Radioman School (Petaluma, CA) we were advised to attempt to log *everything* we heard. Well, that was an impossible task due to the volume of calls passing over the seas nightly! (Keep in mind

that only short calls were permitted on 500 - as soon as contact was made one was to quickly move to a working frequency). What you'll see in the following log consists of only about 10-25% of the signals transmitted.

The log consisted of 3 columns: The actual signals copied, the frequency, and the time. A slash: / was used to indicate a break between two transmissions, *except* when it was actually sent over the air to indicate two frequencies - you'll see ``454/440" meaning ``you send on 454 kc and I'll send on 440 kc" (the -.-. is actually sent).

Ships had a choice of using 425, 454, 468, or 480 kc as their working frequencies, while shore stations were only assigned one working freq, usually near one of the above, so in order to work duplex one of the above, which was closest to the shore's freq, would be used by a ship.

Everything you see will be actual transmissions except:

1. When preceded by OPNOTE (= operator's note)
2. The BEGIN or END SILENT PERIOD entry.
3. The NO SIGS entry (meaning no signals heard in last 5 min.) Notice the generous use of `dit dit' (and us hams probably thought *we* invented it!). In the log it is indicated by `EE'.

RADIO LOG U.S. COAST GUARD COMMSTA HONOLULU: NMO

RADIO DAY: 17 JULY 1979

POSITION: MF CW (500KC / 600M)

OPNOTE: RM3 J.D. HERMAN ON WATCH, OPS NML 0800Z

OPNOTE: OBTAINED WWVH TIME TICK - CLOCK CORRECT 0801Z

VVV VVV TEST TEST DE NMO GE / GE / GE ... 500 0802Z

3WLM 3WLM 3WLM DE ZLW ZLW HW? / ZLW DE 3WLM QRU? / R
480/488 / OK UP / UP / EE / EE 500 0803Z

CQ CQ CQ DE VIA VIA VIA FOR TFC LIST QSW 446 AR 500 0804Z

KOK KOK KOK KOK KOK KOK KOK / DE / KOK KOK KOK KOK KOK /
LID / KOK KOK KOK / DE / KOK DE FJNB FJNB DE KOK GE UP / R UP /
EE / EE 500 0806Z

JKPN JKPN DE JLRT JLRT / JLRT DE JKPN QTH? / NW AM 1500 KM
SAILING 153 DEG OUT OF TOKYO / JLRT DE NMO PSE QSY / SRI
NMO / JKPN DE JLRT UP 512 / UP 500 0807Z

OPNOTE: STATIC CRASHES ARE EAR-SPLITTING TONIGHT 0810Z

CLA CLA CLA DE 7XMC 7XMC K / 7XMC DE CLA GE / GE OM DO U
HV SOUTH PACIFIC WX BETWEEN 20 ES 30 S W OF 180? / NOT YET -
WILL HV IN 30 MIN - LSN FER OUR CQ / OK TKS / SEEU / SU 500
0814Z

BEGIN SILENT PERIOD 500 0815Z VVV / SP / SRI 500 0816Z

TTT TTT TTT CQ DE VIM VIM VIM CYCLONE WRNG NR 17 QSW 428
UP / TTT TTT TTT CQ DE VIS VIS VIS CYCLONE WRNG NR 17 QSW
460 AR 500 0817-18Z

END SILENT PERIOD 500 0818Z

FUM FUM FUM DE KNLW KNLW OBS K / KNLW DE XSU FUM QRT
TIL 0900 K / R HV OBS K / OK UP 480/488 K / R UP / EE / EE 500 0820Z

CQ CQ CQ DE ZDLK ZDLK BT ANI ONE HV 0700 HYDROPAC BCST? /
ZDLK DE DJKV R UP 480 HW? / OK / EE / EE 500 0824Z

NMC NMC DE WRTY WRTY / WRTY DE NMC GE / GE I NEED NTM NR
12-384 K / R UP 425/428 K / R UP / EE / EE 500 0827Z

TTT TTT TTT DE KNLH KNLH KNLH BT HAZARD TO SHIPPING LOST
CONTAINER OVERBOARD QSS 425 UP 500 0830Z

OPNOTE: SHIFTED TO 425 KC TO COPY KNLH'S MSG 0830Z

OPNOTE: KNLH LOST CONTAINER IN POSN 43.48N 135.81W - INFO
PASSED TO RCC FOR DISTRICT 12 NTM 0831-33Z

KNLH DE NMO QSL WILL PASS UR MSG TO SAN FRAN K / NMO DE
KNLH R TU OM NIL VA / DE NMO SU VA / EE / EE 500 0834Z

CQ CQ CQ DE CLA CLA CLA FOR SOUTH PAC WX ES NAV WRNGS
QSW 470 AR 500 0835Z JNA JNA JNA DE JNTS JNTS NW ARR TOYKO
K / JNTS DE JNA QSL QRU K / QRU VA / EE / EE 500 0837Z CQ CQ CQ
DE KPH KPH KPH TFC LIST ES WX 512 AR 500 0840Z

BEGIN SILENT PERIOD 500 0845Z

XXX XXX XXX DE 9FJT 9FJT 9FJT BT ENGINE ROOM FIRE NOW
EXTINGUISHED NO POWER DIW NEED ASSISTANCE 28.38S 28.38S
165.55W 165.55W / 9FJT 9FJT DE VIB VIB QSL UP 425/430 K / VIB DE
9FJT R UP / EE / EE 500 0847-49Z

OPNOTE: SPVR NOTIFIED OF 9FJT'S XXX 0849Z SILENT PERIOD
ENDED AT 0848Z 0850Z

CQ CQ CQ DE NRV NRV NRV WX AND CG MARINE INFO BCST QSW
435 KC AR 500 0850Z

NMO NMO DE KPDR OBS K / KPDR DE NMO UP 454/440 K / R UP / EE /
EE 500 0854Z

KPDR DE NMO GE K / NMO DE KPDR GE OBS QRV? / R AA 99 440/454
0855Z OPNOTE: RCVD OBS FROM KPDR 454 0856Z

KPDR DE NMO QSL QRU? K / NIL TU OM SU VA / SEEU VA / EE / EE
440/454 0856Z

CQ CQ CQ DE XJA XJA XJA FOR WESTERN PACIFIC WX QS / CQ CQ
CQ DE 5JA 5JA 5JA TFC LIST AND WX QSW 4 / CQ CQ CQ DE KFS KFS
KFS TFC LIST Q / CQ CQ CQ DE / 500 0900Z / LID / UR A LID / AM NOT
/ ARE TOO 500 0902Z

XXX XXX XXX CQ DE 7JN 7JN 7JN OVER DUE FISHING VSL QSW 441
AR 500 0905Z

5LVW 5LVW DE / ? / 5LVW DE / ? DE 5LVW SRI OM NO COPY / UP
8361 KHZ / R UP / EE / EE 500 0909Z

NPQM NPQM DE NOJ NOJ / NOJ DE NPQM 12 MHZ IS WASTED QSY 8
MHZ RTTY / NPQM DE NOJ OK / EE / EE 500 0912Z

BEGIN SILENT PERIOD 500 0915Z TTT TTT TTT CQ DE XSA XSA XSA
UNMARKED SHOAL REPORTED QSW 448 KHZ AR 500 0917Z

XXX XXX XXX DE ONJK ONJK ONJK DH MEDICO CREWMAN WITH
APPENDICITIS K / ONJK DE VIB UP 454/441 K / VIB DE ONJK R TKS
UP / EE / EE 500 0917-18Z

END SILENT PERIOD 500 0918Z

What you see above is a typical one hour period of evening Pacific signals transcribed with, again, at most 25% of the transmissions logged. You noticed the exchanges were short (with operators quickly moving off 500 kHz to a working frequency) and informal with generous use of pleasantries such as TU = thank you, TKS = thanks, SU = SEEU = see you, OM = old man, GE = good evening and of course the ever present `dit dit'. Note the prosign VA is the ham's SK. The 0900 entry was typical for the top of the hour - a dozen CQ's being sent at once!

The idea of 500 kHz being an international calling *and* distress frequency was finalized at the 1932 Madrid Radio Conference (see Schroeder 1964). I find it a shame that amateurs never implemented the idea of a calling frequency on each band which everyone would monitor, in which short station-to-station calls and CQs could be made, with parties moving to another frequency for the QSO.

Two-meter repeaters come close to this idea but operators fail to QSY off the repeater to try to work simplex. Oh well - something about Old Dogs, New Tricks...

End of part 7

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On 12 July 1999 the last commercial Morse code message in North America was sent from a Globe Wireless station south of San Francisco. This is a report on what it was like to be at that station on that day.

The End of Morse

(c) Dick Dillman 1999



Paul Zell

Dick Dillman

The end came yesterday. We knew it had to come. But the end had been predicted so many times for so many years while Morse soldiered on, paying no attention, providing good, reliable service for decades after it was declared dead... maybe some of us thought the day would never come. But when KPH/KFS signed off the air for the last time yesterday it was the end of commercial Morse in North America.

It was a sad day but one I knew I couldn't miss.

Tom Horsfall and I were invited along with many others to be present at the Half Moon Bay master station of Globe Wireless from which the final messages would be sent. I held in my hand two messages I hoped to have transmitted. They were messages of greeting and farewell from the Maritime Radio Historical Society and the San Francisco Maritime Historical Park - typed of course with a mill on historically correct Mackay Radio radiogram blanks. I secretly dared hope that I myself might be permitted to send these messages. I brought along my favorite straight key in its carrying case and my radiotelegraph license just in case.

I have visited KFS many times over the years. On my first visit the operating room had nothing but Morse positions. Over the years the number of computers steadily advanced as the Morse positions retreated to the west end of the building. When we walked in yesterday both sides of the operating room were lined with racks holding sleek black computers and monitors. And way down at the end was the one remaining Morse operating position.

Tom spotted him first... Paul Zell, the Morse operator on duty. We knew him by his green eyeshade. All real radiotelegraph operators seem to wear green eyeshades. Pictures I have taken at KFS and KPH decades ago show men in green eyeshades at the key or the Kleinschmidt. Pictures taken at those stations decades before show the same thing. I am convinced there is a secret ceremony of the green eyeshade in which the distinctive headgear is carefully placed upon the head of the operator newly welcomed into the fraternity. This is of course a ceremony we have not been permitted to witness, a ceremony that will never again take place.

I sat down next to Paul Zell as we listened to Russian and Cuban ships calling their respective coast stations. I realized that true to its nature, Morse will carry on in other parts of the world even after the keys in North America are finally silent. I had to ask Paul the question... "How are you feeling about today?" An impossible question to answer but he answered it. "CW was my life," he said and turned back to the receiver.

More people started to arrive, a surprising number of reporters among them. But the real dignitaries in my eyes were the radio men and women who knew they had to be here on this day. Jack Martini, manager of KPH when it shut down (he intentionally left the receivers on when he left). Ray Smith, the operator who sent the farewell message when KPH at Bolinas/Pt. Reyes shut down. John Brundage, manager of KFS in its golden age of Morse. Denise Stoops, the first female operator at KPH. Rex Patterson, chief engineer at KFS in its glory years. And many more. We swapped stories and I showed them my photo album. We ate from the delicious spread of food provided by Peter Kierans of Globe Wireless. But our eyes kept glancing at the clock. It was now less than two hours to the end.

I finally screwed my courage to the sticking place and asked Tim Gorman, Director of Operations, if my messages might be sent and if, perhaps, I might be permitted to send them. Tim had met me only that day. I might be a fumble-fisted lid for all he knew. And he was busy with the press and with all the details of the ceremony. "We'll see..." he said. And that was enough for me.

Now the final transmissions from WCC/WNU began. We copied them off the air. The room fell silent. I noticed one man in particular. He was probably the oldest person there but had a presence that we used to call "spry". He had a quick laugh and twinkling eye. I watched him now. He stood leaning forward, eyes closed, as the sound washed over him... drinking in... the Morse. He was a pioneer operator, the genuine article, no doubt about it. I wanted to meet him, to ask his name at least. But of course I couldn't possibly interrupt his reverie.

Paul Zell sent the first of the KFS/KPH sign off messages from the local position. Again we were all silent and when he finished... there was a round of applause! Applause for a radiotelegraph operator! Well deserved applause, deserved by every radiotelegraph operator everywhere, applause unheard for 80 years. Paul made a small, embarrassed nod of his head, accepting the tribute for himself and for all the operators on all the ships and at all the coast stations over the years.

Then he copied the last commercial message KFS would receive, from the Liberty ship Jeremiah O'Brien/KXCH on 500kc. The op on the O'Brien said he would standby until 15 past the hour. Zell replied "better make that 18 past, OM." The operator on the O'Brien understood and said that yes, he would observe the silent period - which of course is no longer required by regulation but is absolutely demanded by tradition. Then Paul said that he'd standby "on 600". The crowd got a big kick out of that - 600 meters instead of 500kc. Subtle, but all the more meaningful for that.

I saw Tim approaching me across the room. "Get your key...", he said. Get your key! Holy mackerel, they were going to let me do it! So I got out the key, gathered up my messages, and plugged in. But then I realized: the best Morse operators in the country... the best Morse operators in the world, probably... would be listening to every dot and dash I sent! They would be too polite to say anything if I flubbed it of course... but they and I and everyone else in the room and all the ships at sea would know! My palms started to sweat at that thought but there was no turning back now. I took Paul Zell's seat. I sent a couple of Vs to see if there was side tone in the 'phones. The knob on the key was loose! I tightened that up... and began to send.

I sent the first message from the Maritime Radio Historical Society and all went well. Then I signed the station calls.. "de KPH/KFS". Tom and a few others noticed that I sent KPH first and understood why. Then the second message from the San Francisco Maritime Historical Park. And the calls again... followed by my "sine", RD, ... and AR. I had gotten through it! And

there was a round of applause for me! Thoroughly undeserved but very much appreciated. Someone even said, "Nice fist". High praise indeed in that crowd.

Then the final messages from KFS/KPH began. Paul Zell sent the first ones. Then Tim Gorman sat down and proved himself to be much more than just a competent manager. He sent the final message in meticulous Morse using the chrome-plated Vibroplex, signed off with "What hath God wrought" ... then SK... and it was over.

There were wet eyes in that room, mine among them. I heard more than one tough-looking old timer mumble, "I didn't think it would get to me, but..." and then turn away.

I had one further item on my agenda: to get my license endorsed showing me as an operator at KFS/KPH on the last day of North American Morse. Once again Tim Gorman showed himself to be a gracious and understanding man as he took pen in hand to write "satisfactory" in the blank provided for operator evaluation on the back of the license and add his signature.

Finally it was time to go. I gathered up my key and my photos and my papers and shook hands once more with all the great men and women who were there. And finally we were heading north on highway 1 with the beautiful Pacific sunset on our left and the green coastal hills on the right. "That was one helluva day," Tom said. "Yep," I agreed.

Vy 73,

Dick/"RD"

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