

# CQ de WA2LQO

**Seventy Three Years: 1944 -2017**

*The official independent voice of the Grumman Amateur Radio Club.*

**AUGUST 2017 VOLUME 90 NUMBER 8**

**MEETINGS ARE HELD 5:30PM ON THE 3<sup>RD</sup> WEDNESDAY OF EACH MONTH**

**The Summer Dinner Meeting will be held on August 16th. See president's note.**

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## **How Ham Radio prepared me to be an Engineer**

by Bob Wexelbaum, W2ILP *(Continued from July 2017)*

*Where I continue telling about my experiences as a GI at the 181st Signal Depot in Young Dong Po, Korea.*

My best friend, Monte, had been recognized as a homosexual. Monte was a chess player, an appraiser of relics and he had, with my help, earned a ham license. He was not an average GI. He was not a macho-man. He never spoke about wanting to get married or having had any girlfriends. He showed no sexual desire toward females. He was, however, sympathetic toward everyone, including Koreans who were hard workers, as well as some Koreans who were desperate thieves. He was a humanist with no bigoted prejudices. Before confronting Monte, I talked to Frank privately. Frank was the oldest and most worldly man in our tent. I wanted to get his opinion about homosexuality. Sexual education was a taboo subject when I went to high school and I was poorly informed at that time. Frank admitted that he was disgusted by homos. He also admitted that although he was trying to fight his own prejudices he honestly could not say that he was entirely unbiased against Asians, Blacks, homos, lesbians...and Jews like me. I gave Frank an A for honesty; He was not a hypocrite. My friend Stanley Milgram had said that he would evaluate Blacks (who were then called Negroes) as individuals but wouldn't want to picnic or swim at a beach where there was a majority of Blacks bathing. We are all hypocrites at some level. It was said that "Gentlemen prefer blondes." I don't know who said it first, or if it was only said in a locker room. When does preference become prejudice? When do people who don't like stinking garlic become gentlemen or part of the elite landed aristocracy? Are "gentlemen" too gentle to be warriors? Frank said that a debate about homosexuality was being waged between two points of view; One side believed that some men were born to be gay (just like they could be born to have blue or brown eyes) while the other side said that some males turned into queers because of the environment that they grew up in. With Frank's enlightenment in mind, I privately confronted Monte. Monte shocked me by telling me that his father was a Brigadier (3 Star) General in the Marine Corps. Monte and his only sibling, a younger sister, had grown up traveling with Monte's mother to many military communities, wherever his father's assignments took them. Monte spent his elementary and high school days in many different schools, overseas and in California. When it was time for Monte to go to college his parents divorced. Monte's mother could no longer cope with being a traveling officer's wife or accepting Monte's father's lack of fidelity whenever she couldn't travel with him. She decided to permanently reside in Arlington, Texas which was (and is), by the way, the headquarters of USA Mensa and of W5YI-VEC, and Monte enrolled in the Southern Methodist University (SMU) as an engineering student. Monte blamed neither his Mom nor his Dad for the circumstances. He respected both but he was initially more influenced by his mother since he had spent more time with her. That was until his father met with him and told him to join the Army as a Private and become a man. Monte's father believed that a military environment could de-program his son, who showed homosexual tendencies. He was, in fact, ashamed of his son. Monte was proud of his Dad and did as he was told. After speaking to Monte, I mentally entered him on a list of the 181<sup>st</sup> Signal Company's guys who could have easily avoided duty in Korea but who for different reasons had volunteered to get there, because frankly if they could not get to Korea they would feel that their handicapped lives would be meaningless. (There will be more GIs to add to that list in the future.)

I was glad that we did not whistle blow about the lack of scheduled operation at the 8<sup>th</sup> Army MARS station of Seoul. The fact is that the base commander did not realize the value of MARS communication as well as the

commanders of most other bases did. He thought of MARS as a hobby to be enjoyed by a few amateurs but not as everyone's morale boosting communication net. That is why the name of MARS had to be changed from the Military *Amateur* Radio System to the Military *Affiliate* Radio System and its importance was later stressed by Barry Goldwater, Arthur Collins and Gen. Curtis Lemay when they began to promote SSB operation.

What we did not know, and did not have a need to know, was that the military had its own vast reliable communication network. The locations of its stations, as well as the RF frequencies and modes that were used were top secret. The frequencies used were probably not used at the same times every day and the messages probably employed cryptography. The military stations carried formal strategic orders issued by a chain of commands all the way down from the president of the US who was commander-in-chief of all armed forces. The military stations could patch telephone or RTTY data from the Red Cross and from military headquarter staffs which were better organized than MARS. MARS did give some GIs a feeling that their communication with loved ones could be made privately and not under the watchful ears and eyes of the military, where they would have to limit unfavorable comments. (to be continued next month)

### **PRESIDENT'S NOTE by ED GELLENDER, WB2EAV**

Every August we dispense with our usual meeting to have a picnic or dinner out. This year we decided again to have dinner at LaCasa, on Long Island Sound at Crab Meadow Beach in Northport, on Wednesday August 16<sup>th</sup>. We meet at 5 PM and will sit down to order at 6 PM.

Directions: Easiest way is Sunken Meadow Pkwy north to last exit, SM5W, for Route 25A west. Proceed to Waterside Rd, turn right and stay on Waterside 2 miles until it ends at the beach. Alternately, you can take Larkfield Rd. all the way north as it becomes Vernon Valley Rd, then Waterside Rd. A third option is to load: <445 Waterside Rd, Northport, NY> into your GPS and let it do the navigating.

Last month I told you about the new Yaesu FT-891 HF rig that I was so impressed with. Well, I have had it for a few weeks now and I figured that I would let you know I am still in love. The stability and receiver signal processing are exactly what I hoped for, and I have been getting good signal reports on 20 and 40 CW.

The rig has some full-time dedicated controls, such as the power switch, tuning knob and volume control. It also has a tremendous amount of capability and features that are menu driven, using a few controls for multiple purposes. For starters there is a dedicated RIT enable switch, although RIT tuning itself uses the "multi" (for multiple use) knob. For band and operating mode, quickly pressing the band button and then using the tuning knob selects the band; Pressing and holding the switch and then using the tuning knob will select the mode.

There are also menus with dozens (hundreds?) of selectable modes. Working them during a QSO is the definition of insanity, so they must be optimized before going on the air. I spent a fair amount of (frustrating) time pick those features I really want, and am pleased to report that I am happy with what I set up. First, I optimized the 3 programmable keys (A, B and C) for my CW filtering preferences. Switch A is set to select wide or narrow filtering. I usually use the wide SSB filter to tune around and when I hear a signal of interest I change over to the narrow CW filter. Switch B enables the multi knob to tweak the currently selected (narrow or wide) filter bandwidth, and switch C controls an interesting feature that allows the center of the passband to be slightly tuned with the multi knob to hopefully push an interfering signal out of the bandpass. Second, I set up the menus reached with the function (F) select knob with the two most useful to me. Quickly pressing the F button brings up a menu, already pointing to a computerized noise canceling mode; while pressing and holding the F button brings up the menu item setting transmitter power (useful for setting my antenna tuner when I change bands.) The transmitter metering is also selectable, and I waded through menus to set it for SWR and leave it there. Not only does the rig simply put out the programmed power (assuming halfway decent SWR), but my ol' outboard SWR bridge shows power anyway. I like the way the SWR indication dispenses with setting forward power to full scale and then switching to read reflected power...It simply shows the SWR every time you press the key. Nice! Well, I have set the rig up for seamless CW operation just the way I like it.

For form, I really should go through a similar exercise one of these days, to work up good settings for SSB work. Then I'll have to figure out how long it will take to reprogram to go back and forth.

**GRUMMAN AMATEUR RADIO CLUB  
MINUTES OF EXECUTIVE BOARD/GENERAL MEETING 7/19/2017**

**By Karen, W2ABK**

The meeting was called to order by Gordon at 5:31 PM.

**TREASURER'S REPORT – Ed, WB2EAV**

Finances continue to be in good shape.

**REPEATER REPORT – Gordon, KB2UB**

Repeaters are working.

**NET REPORT – Karen, W2ABK**

Thursday night net at 8:15 PM on 146.745 MHz had 0 check ins.

Thursday night net at 8:30 PM on 145.330 MHz had 3 check ins.

Sunday morning net at 7:30 AM on 7.289 MHz had 2 check in.

**VE REPORT – Ed, WB2EAV**

No applicants applied. No VE Session this month.

**GARC NETS: Net Controller Karen W2ABK 40 Meters: 7.289 MHz at 7:30 AM EST Sundays**

**2 Meters (repeaters) Thursdays: 146.745 MHz (-600 kHz) at 8:15 PM**

**145.330 MHz (-600 kHz) at 8:30 PM. Tone for both repeaters: 136.5 Hz.**

**ARES/RACES NETS: Mondays.**

**NEW BUSINESS**

**Our summer picnic/dinner will be on August 16th at LaCasa Café, 445 Waterside Ave, Northport;** the same place as last year. 5:00 PM – 5:30 PM is Happy Hour outdoors, then 6:00 PM is sit down dinner inside. All checks will be separate. We hope to see everyone there!

**Be sure to watch for the eclipse that will take place on August 27<sup>th</sup>** but don't look directly at it. I will try to take still picture of it with a digital camera and lots of filters –w2ilp-- .

**WEBSITE**

The GARC web site can be found at <http://www.qsl.net/wa2lqo>. Webmaster is Pat Masterson, KE2LJ. Pictures of GARC activities, archives of newsletters, roster of members, and other information about the GARC may be found there. The membership roster has not been updated to delete Silent Keys and to enter new e-mail addresses for remaining members and friends. Please inform Pat Masterson if you need to delete, update or edit your roster information.

**MEETINGS**

Board and General Meetings are now combined. Unless otherwise notified they start at 5:30 PM at the Ellsworth Allen Park in Farmingdale. **Exception: August 16 at LaCasa café in Northport.**

**PUZZLE**

*Last month's puzzle was:-*

Before there was phase locked loop frequency synthesis which mode was troubled by the “capture effect”?

- A. CW
- B. AM
- C. FM
- D. SSB

*Answer:* The correct answer is C.

*This month's puzzle is:-*

Who developed the super-heterodyne radio receiver circuit?

- A. Marconi
- B. Tesla
- C. Armstrong
- D. Fessenden

## Numbers? Constants? Atoms? Waves? Quantum?

(Continued from July 2017)

Max Planck became silent after his meeting with Adolph Hitler but his silence itself was a message to the world community of physicists. His *CONSTANT* would remain constant regardless of politics or economics. Hitler hated Planck, (who was not Jewish) for his attempt to defend Jews, so much, that he found ways to punish him. When there was a failed attempt to assassinate Hitler, Hitler sentenced to death all those who he believed to have had been involved in the assassination plot. He included Planck's son using a weak "guilt by association charge" and had him sentenced to death along with the others.

Einstein used Planck's constant, when he mathematically developed the photoelectric theory which earned him a Nobel Prize. Advanced nuclear physics rested on the shoulders of Planck's constant, including the work that led to the discovery of nuclear fission, which led to the dropping of A-Bombs on Japan. The public were all aware of the A-Bombs which ended WW2 and forced Japan to unconditionally surrender. People who had little interest in science suddenly were interested in learning the names of the researchers who had worked on atom-splitting projects that had begun before FDR received a famous letter from Einstein that alerted him to the fact that German scientists were ahead of the US and our allies. There were Jewish scientists who had managed to flee Europe because of Hitler's ban of Jewish scientists from German labs. In the case of Enrico Fermi of Italy, because of the irrational propaganda against Christian scientists who were being called traitors by the NAZIs when they practiced. "Jewish Physics". Scientific conferences in Europe during WW2 became mundane because discussions of "Jewish Physics" were prohibited. This was like trying to stop all the Hams in the world from using the Morse Code because S.F.B. Morse didn't like the Catholic Pope. (BTW Morse's negative dated opinion of the papacy was real according to his autobiography). There was a Pennsylvanian politician who wanted to officially make pi an even integer so as to make the subject of Geometry easier. Obviously his circular reasoning failed.. Hitler would never demand a modification of Planck's constant. He knew that he couldn't eradicate science even when a master race would conquer the world. When Hitler invaded Czechoslovakia in March 1939, Hungarian Physicist Leo Szilard warned physicists, including the Joliet-Curies to stop publically writing about nuclear fission and chain reactions because of their potential military use. In April 1939 the Joliet-Curies answered Szilard with a one word response: "No" and Frederic-Joliet Curie immediately sent the magazine "Nature" the conclusions from the experiments and calculations that he and Irene had performed which estimated the number of neutrons emitted by fission which could trigger a chain reaction. The Joliet-Curies believed that if the scientists in Allied countries stopped publishing they would have already given up the war to Hitler by restricting their freedom of speech. It was Szilard and Fermi, who while working in America, had prompted Einstein to send the famous letter to FDR. It was taken seriously because it was then not just a possibility but a probability that a nuclear chain reaction could be used as a devastating weapon of war. The letter was dated August 2<sup>nd</sup>, 1939. The letter told that large quantities of uranium were not available in the US, but could be bought from Canada, the former Czechoslovakia, and Belgian Congo. FDR responded to Einstein, saying that the Army, Navy and the Bureau of Standards would begin investigation the subject of chain reactions. WW2 had begun..and so had the race for the construction of the first A-Bomb.

The "Manhattan" project received its name because it began at Columbia University in New York City. It soon spread to many locations in the US, the UK and Canada. The project required the production of an isotope of uranium. That fission of that isotope and the design of a fuse for its timely energy release required many calculations at a time when digital computers were not yet invented nor were digital pocket calculators. Mechanical arithmetic calculators that were similar to IBM cash register devices, which were used in banks and retail stores had to be used. Many different teams worked to get math results. When their answers did not agree because of human or mechanical errors they would be forced to start over and repeat all work. The purpose of the project was initially kept secret. Some of the scientists involved had actually worked as spies in Europe, loyal to the US, while others became suspect of being spies loyal to Germany while working at the Manhattan project. Most of the scientists were foreign born but there were a few who were born in the USA, including Richard Feynman.

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**Newsletter** CQ de WA2LQO is published monthly by the GARC for its members and friends.

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**GARC VE EXAMS** We normally proctor exams for all classes of ham licenses on the second Tuesday of each month, at Bethpage Community Park, starting at 5:30 PM. Sessions will be cancelled if no one applies, so be sure to register with Ed Gellender      [wb2eav@yahoo.com](mailto:wb2eav@yahoo.com) All new applicants should get a FRN from the FCC, or they will have to write their Social Security number on the application form. Applicants for an upgrade must bring a copy of their present license for us to send in. All applicants need a picture ID such as a driver's license, and the fee is \$14. Study material may be obtained from ARRL-VEC at <http://www.arrl.org>, W5YI-VEC at <http://www.W5YI.org> or other VECs. All VECs use and update the same Q&A pools.

**Editorial** My Yaesu FT-920 HF transceiver can't transmit. This may be due to my trying to load it into a bad 40 Meter antenna. I suspect that the long coax transmission line may have been damaged when rerouted during changing the siding on the house. I tested the rig using a double needle SWR bridge and a Heathkit 50 ohm dummy load to eliminate the antenna and although the display says TRANSMIT when the push to talk mike switch is pressed there is no RF output. I have the operating manual. It says that the 3 volt lithium battery should be replaced if it is more than 5 years old or measures less than 3 volts. I removed the bottom plate of the FT-920 and replaced the battery. The batteries cost only 2 for \$1 in the Dollar Store. This did not solve the problem. I posted on QRZ and explained the problem. After many hams had viewed my post I received some good suggestions from a British ham. I also got a link that enabled me to download a 135 page service manual (which Yaesu calls a Technical Supplement). When I worked for Collins Rockwell I could not repair the digitally controlled general aviation HF transceivers without service manuals that contained schematics, alignment instructions, pictorial printed circuit board layouts and part lists. I have most of the test equipment that I may need to fix my radio but I haven't found time to work on it or the antenna coax yet.

While driving to register to take a Driver's Safety course in order to lower car insurance costs, an idiot symbol lit up on my dashboard. I looked up the symbol in the driver's manual. It said "Take the car to the dealer ASAP". The problem turned out to only be a faulty thermal sensor. It cost over \$300 to use diagnostic test equipment to find what was wrong and another \$400 for the cost of a \$5 sensor plus the labor to screw it in... plus tax. The good news is that there was nothing overheating and nothing else had to be replaced. That is why I would like to be able to fix my own car, as I am trying to fix my own FT-920. But that is now impossible. I could have bought a new HF transceiver for what it cost to turn off the alarming symbol light in my 2002 Toyota Camry. I don't want to trade in the Camry because the newer models have even more air bags and electronic stuff that might light many more symbols which flag that something else might need servicing at even greater costs. If I live long enough I'll get an electric car...but I probably won't be able to test it with my own multi-meters. Gone are the days when we could negotiate costs with human gas station mechanics.

73, Bob w2ilp (Idiot Light Processing) is now done by AI processors programmed to maximize the repair cost. [WB2EAV: Harbor Freight Tools sells several universal "OBD2 scan tools" to read out trouble codes for as little as \$45, and I have been putting a similar unit to regular use for the last 12 years]

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Numbers? Constants? Waves? Quantum? (continued from page 4)

Now let's get back to the book called "Radioactive". It is the story of two women: Irene Curie and Lise Meitner. To be fair a third woman deserves honorable mention here. She was German physicist Ida Noddack. She mentioned the idea of nuclear fission in an 1934 article but never researched further. She and her husband, Walter Noddack discovered element 75, rhenium. Sort of reminds me of the guy who invented a lemon fizz drink called 6-up. Meitner's article describing nuclear fission was published in 1939, the same year that WW2 began in Europe.

Meitner had worked with Otto Hahn but Hahn had to dismiss Meitner from his lab when the NAZIs banned Jews from all academic and government work. Hahn deleted her from all of her work that occurred before the ban was enforced, preventing her from joint recognition when he received the Nobel Prize for Chemistry in 1944 for the discovery of nuclear fission.

After WW2 was won everyone was interested in the people who had worked to make the A-Bomb possible. They were surprised to learn that women had been the first to recognize the physical principles that made the Atomic Bomb possible. Everyone did not initially praise the two women because of their personal scandals, and the ignorant belief among the superstitious, that only evil witches would brew up such an atrocious bomb.

Irene Curie was denied membership in the French Academy of Science, the same group that had turned down her mother's application years before. She joked about it saying that, "At least they are consistent". Other societies rejected her applications as the cold war and McCarthyism became prioritized, because she and her husband refused to denounce the Communist Party. Undaunted, she continued her work. In 1955 she designed a new nuclear reactor that would be constructed at the University of Orsay, France in 1958 and spent time with her daughter Helene, who had become a nuclear physicist and her son Pierre who became a biophysicist, specializing in green photosynthesis. She had tuberculosis which seemed to be cured by streptomycin which was developed in the US in 1946. After a lifetime in handling radioactive materials the tuberculosis returned and she died of leukemia at the age of 58 in 1956.

I'll tell you the rest of Lise Meitner's story next month. Lise's life paralleled Irene's in many ways. Being Jewish made it even more controversial. (to be continued)