HOW I BECAME A HAM (continued from May 2014)
By Bob Wexelbaum, W2ILP

Synopsis: I will continue to discuss inputs from, my friends and my teachers during my high school years. Not all were hams, but all were my Elmers.

   As soon as the 1949 school term ended Albert Miller and I went to the FCC office at 641 Washington Street to take ham exams. This required traveling by subway to lower Manhattan and walking four blocks. We had both been practicing Morse and reading up on theory, rules, regulations, etc. We also practiced with other friends who were also preparing for ham tests, especially Johnny the steamfitter. Al was better than I at copying Morse. Al was born in The Bronx, but when he was young his parents only spoke Yiddish at home. As a result Al learned English as a second language! Thus Al was fluent in English, but spoke it with a Yiddish accent. It is hard to explain how the Yiddish accent can be recognized; most of it is a difference in inflections that somehow over-emphasizes questions and statements. When you are young there is a window of time when you can quickly master languages and remember large vocabularies. Al's ability to do so carried over into learning Morse. He was able to copy W1AW at 20 wpm, while I was only able to copy at 15 wpm; less under the stress of taking a test.

   Back in 1949, before Novice and Technician licenses, you had to pass a 13 wpm Morse test before you would be able to take the Class B (which became the General Class) written ham exam. The code test was five minutes long and you had to get at least one minute of solid copy, including numerals and punctuations. Al passed the code test and I failed. (It took me two more years to pass). Al then had to take the elevator down to the street level and go across the street to a storefront real estate office, where he paid fifty cents to get his application notarized. I waited while Al took the written Class B test. The FCC examiner did not grade his test at that time, but he was told that he would receive a license by mail if he passed. Al was not sure that he had passed. When we left the FCC office we went to visit Al's father. Mr. Miller was self-employed as a wholesale banana distributor. He worked in an area that was once known as "The Fulton Fish Market". This was near what became the World Trade Center, and most of those wholesale businesses eventually moved up to what is now "The Bronx Terminal Market." Al's dad had to be prepared to deal with stowaways, which sometimes hid in the gigantic banana bunches. He told us that he had found tarentulas, snakes, bats, and once even a small monkey. The warehouse where he worked was temperature and humidity controlled, as well as loaded with sticky rolls of sticky fly-paper. During the summer months, Al's family rented a small cottage in the Catskill Mountains. This was not a borsht belt hotel; you did your own cooking and cleaning. It was a good way to get away from the city summer heat, as very few people had air-conditioning in those days. Al, his mother, sister and brother stayed in the Catskills all summer, while Al's dad joined them only on some week-ends, because he had to stay in the city, tending to the shiploads of newly arrived, ripening, bananas. Well… it came to pass that Al's father, who was receiving mail in The Bronx, received Al's ham license! He phoned up the family in the mountains and informed Al that he had passed the ham exam and his call letters were W2ESU. This was great news and so Al returned to The Bronx to get on the air as fast as he could!

   Al had a Hallicrafters S-40 Receiver. (I thought that my National NC-57 was a better unit; both cost about $90 at that time.) The task was now for Al to build a transmitter and set up antennas so he could operate as a licensed ham. The class B license entitled hams to operate CW on 80, 40, 20, 15, 11, and 10 Meters. Phone

operation was only permitted on 10 Meters. Very few hams were on 6 or 2 Meters locally at that time and fewer still on the exotic UHF ham bands. You would need a Class A license to operate phone on 75 or 20 Meters. The power limitation was 1 KW input to the final vacuum tube plates. If you got close to the limit you had to monitor the final plate voltages and currents with meters of appropriate accuracy. Al realized that he would be limited money wise, power wise and antenna wise. He wanted to set up an AM phone station that could run at least 100 Watts on 10 Meters and also be able to pound straight-key CW on the other HF bands. He wanted to be VFO controlled so that he would not have to depend on buying many quartz crystals. Al got in touch with me (as a consultant) and together we planned for a rapid rush construction project. We rejected the transmitter plans we found in the ARRL handbooks and QST magazines from the public library, and instead merged ideas we found in other ham publications, which featured specific war surplus parts that would be available cheap on the Cortland Street "Radio Row" NYC area. Al bought a ten Meter ¼ wavelength vertical whip antenna, which he would mount on the roof of the apartment house where he lived, along with a few wired radials. The antenna was a good investment, because it could be used in the future if Al ever got his own automobile. He bought RG-8 coax cable to connect the vertical and also for transmission lines for full sized ½ wave 40 Meter and 80 Meter dipoles. The latter had to be mounted across two apartment house roofs. Al hoped that the landlord would not raise his families rent. They did not own a TV set at that time and he hoped that the landlord and super would not notice his antennas, as they would have if he put up a beam antenna. There would thus be three coax cables entering his room. He planned to connect them manually to a coax relay receive-transmit switch.

Al bought two ARC-5 transmitters; one was to be an 80 Meter VFO and the other a 40 Meter VFO. Building a transmitter was going to be expensive. Surplus transformers were all 400 cycles, and could not work on 60 cycle home power lines. This required a visit to a store known as "Blan the Radioman". Three power supplies would be required; one for the VFOs and multipliers, another for the speech amplifier-modulator, and a third, larger, one for the final amplifier. The latter two also required swinging and smoothing chokes. The most difficult item to locate was a modulation transformer. Mr. Blan totaled up the cost and it came to well over $200. Al dickered. He said that he was a new ham and if he couldn't have the transformers and chokes he couldn't get on the air. After going up and down on the price, Blan said that he would accept whatever Al had with him, if it seemed reasonable. They agreed on $115 with the option that the modulation transformer could be exchanged if it didn't work properly.   Next month I'll continue with Al's project. (To be continued)

PRESIDENT'S NOTE by ED GELLENDER, WB2EAV

Field Day is Saturday, June 28th and Sunday, June 29th. We will be back at Haypath Road Park in Plainview. To get there take NY135 to Exit 9 and head east. The road immediately turns north, becomes Plainview Road, and goes 0.4 Miles to Haypath Road. Turn right on Haypath and proceed 0.8 Miles to the park on the right (just before the traffic light at Old Bethpage Road.)

Let me bring you up to date on the situation at Northrop Grumman and the effect that it has on the club. Northrop Grumman announced last year that this summer and fall the Engineering effort for the E-2D Advanced Hawkeye aircraft will be moving from Bethpage to Melbourne, Florida. The company is adamant that the staff either relocate or be laid off. (A strange way to do things in an outfit where everybody is always travelling.) It also appears that keeping to the move schedule is the highest priority, with customer satisfaction a very distant second. Unsurprisingly, the young computer engineers that they had counted on relocating all quit in short order, while those of us older guys, who actually know how to keep RF gear going, are finding it more difficult. In my specific case, I believe that they actually will lay me off as planned on October 17th, and from that point on the IFF gear on the planes will have no technical support at all (customer ain't exactly thrilled about that one). While I find that attitude mind boggling, they seem to mean it. At that point both the club and I will lose all access to the Bethpage repeater site, which is to be demolished shortly thereafter anyway. The club can continue without any linkage to Northrop Grumman (they have been abandoning all support for years now anyway), but admittedly things with the club will be quite different.

Ed, WB2EAV   Page 2

<p style="text-align:center">GRUMMAN AMATEUR RADIO CLUB
MINUTES OF GENERAL MEETING 5/21/2014
By Karen, W2ABK</p>

The meeting was opened by Gordon, KB2UB at 5:30 PM

TREASURER'S REPORT – Ed, WB2EAV

Finances continue to be in good shape.

REPEATER REPORT – Gordon, KB2UB

The 145.33 repeater is working, but intermittent.

NET REPORT – Karen, W2ABK

Thursday night net at 8:15 PM on 146.745 MHz had 2 check-ins.

Thursday night net at 8;30 PM on 145.330 MHz had 2 check-ins.

Sunday morning net at 7:30 AM on 7.289 MHz had 0 check-ins.

VE REPORT – Ed, WB2EAV

Two applicants applied for the Technician exam, one passed and one failed.

Three VEs were present: Ed, WB2EAV, Bill, WB2QGZ, and Karen, W2ABK.

OLD BUSINESS

We discussed the solution for the 145.33 MHz repeater problem and alternatives.

Ed is trying to get equipment insurance for Field Day.

NEW BUSINESS

Dave, AB2EF and Karen, W2ABK will be repairing the 40 Meter antenna next week.

PROGRAM

Gordon, KB2UB explained about the Coast Guard Security for the Jones Beach Celebration on Memorial Day.

GARC NETS: 40 Meters: 7.289 MHz at 7:30 AM EST Sundays

GARC Net Controller Karen, W2ABK

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.

GARC Net Controller Karen, W2ABK   **ARES/RACES NETS: Mondays.**

MEETINGS

General Meetings of the GARC are held on the 3rd Wednesday of each month, starting at 5:30 PM, at the Ellsworth Allen Park in Farmingdale. Driving directions and map can be obtained from http://www.mapquest.com. It is suggested that the GARC web site be checked to be certain of meeting location, which may change after this newsletter is distributed. Board meetings are held a week before the General Meeting at the Bethpage Skating Rink. *Meetings may be cancelled or relocated. Check the website.*

WEB SITE

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.

SAD NEWS – HANK NIEMCZYK W2ZZE, SK

We report with sadness the passing of Henryk "Hank" Niemczyck, W2ZZE on May 26th 2014. Hank was an elected board member and active volunteer in club activities for many years. Although he could hold his own on SSB, his reputation as a brasspounder found him every Field Day knocking off CW contact after contact on 80M. When the club had a station on top of Bldg 5 in the 1980's, he was there for most club activities. More recently he usually signed into the Sunday morning 40 Meter WorkedAllGrumman Net. Hank was a veteran of the US Navy, a member of the VFW and the Knights of Columbus. His wife of 60 years, Maria was deceased. He had five children, nine grand-children and two great-grand-children.   [thanks to W2ILP, W2DKM]

INTERNET LINK OF THE MONTH FOR INTERNERDS

The internet link for this month is: ?

To tell the truth I have been unable to find a website that is worthy of your time this month, although I know that there probably are many such sites, because there have been many new technical developments that should be of interest to hams. I do not want to delay the release of this newsletter and so I can only promise to give you internerds a good site next month.

PUZZLE

Last month's question was:-

   In a recent article in the IEEE Spectrum a world famous mathematical genius was the subject of an article that described how the genius, "who knew infinity", had recognized something about the Fibonacci number series that apparently had gone unnoticed for many years. Who was the math genius?

    The math genius I was referring to was Aiyanger Srinivasa Ramanujan (1887 – 1920). I learned about some of his work when I was taking a college course called "Linear Algebra". I was so impressed by his work that I later bought the book called *The Man Who Knew Infinity – a Life of the Genius Ramanujan* by Robert Kanigel. That book was a best seller in 1991. Ramanujan was a self-taught mathematical prodigy from a town near Madras. Madras is in southern India, which was always considered to be more backward and superstitious than the more enlightened and educated Bombay or Calcutta. Ramanujan was brought to Trinity College, Cambridge, England by Professor Godfrey Harold Hardy (1877-1947). Hardy had a motivation beyond Ramanujan's math genius to import him. Hardy took credit for Ramanujan's work until he died. Then Hardy admitted that he was gay and had used Ramanujan as a lover as well as a mathematician. This all took place before and during World War I, when anti-war protests were made by the philosopher Bertrand Russell and others at Trinity. Ramanujan was born very poor, although he was a Brahmin, which is not the lowest caste in India. He was a vegetarian, and suffered from the very cold climate at Trinity as well as the lack of fresh fruits and vegetables, which probably led to his early death. Ramanujan's work was used by the British military for weapon control system ballistic computations. Some of his number theory intuition has recently been found very necessary for modern computer software development. Even if you are not interested in the math that is presented in the book, the historical significance of Ramanujan's time can be overwhelming. There is no room to detail it here. I can only suggest that you read the book yourself. We all may know of cases where others take the credit for the work of technicians or engineers…and then lay them off to avoid the truth…Perhaps such stuff doesn't belong here…I am just generalizing folks…

Next month's question is:-

Innovative engineers have been taking the lenses off of their multi-pixel digital cameras and adding new attachments. What have they been able to accomplish?

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Newsletter

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GARC VE Exams

We normally proctor exams for all classes of ham licenses on the second Tuesday of each month, starting at 5:30 PM. The exams may be given at various locations.   Ham Exams are: Element 2 – Technician, Element 3 - General, Element 4 – Amateur Extra Class. All applicants must pre-register to determine the location of a VE session by contacting Ed Gellender WB2EAV. Time and location of exams are subject to change. If there are no applicants VE sessions will be canceled. The fee is $14 for all exams taken at one sitting. New first time applicants should be aware that their Social Security Number will be required on the application form unless they register with the FCC for an FRN. Applicants for an upgrade should bring their present license and a photocopy of it. All applicants should bring picture ID such as a driver's license. Study material may be bought from the ARRL-VEC or W5YI-VEC http://www.arrl.org or http://www.w5yi.org. All VECs use the same Q & A pools.

Editorial

Recent events have been hectic for me. I had planned to have hernia surgery for a rupture but it was called off indefinitely because it was not deemed to be an immediate life threat at this time. My wife, Ethel, however was advised to have a total hysterectomy because of the potential risk of cancer. My wife was believed to be in excellent health prior to her surgery. After the surgery, her female surgeon was happy to report to me that the surgery was a great success. No cancer was found, she had only lost 6 ounces of blood, and that she could go home after only two nights of recovery at the Stony Brook University Hospital. She was sent to a beautiful hospital room on the 14th floor. Her vital signs seemed OK at first, but she then suffered two heart attacks, which got all the nursing staff excited, because she was unconscious for short periods. Our cardiologist was summoned and a member of his group came to consult on Mother's Day. Somehow my wife's red blood count had gotten very low, and her blood pressure wasn't normal. She was given two pints of blood, and prescribed a blocker. She had to undergo a cardiac stress test (chemical rather than running). She stayed in the hospital for four nights and was hooked up to a monitor when we brought her home. So what has this got to do with radio? My wife is now using a monitoring system called "Cardionet MCOT". In thought that it would communicate with the doctor's computer via a telephone line but it does so via our new WiFi router.. without any password!

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<u>FIRST CLASS MAIL</u>
Do Not Delay

SOLVING FERMAT'S LAST THEOREM (continued from April 2014)
By Bob Wexelbaum. W2ILP

Fermat's Last Theorem states that: No 3 positive integers: a, b, and c *can satisfy the equation;* $a^n + b^n = c^n$, *for any integer where* n *is greater than* 2. *We had shown that* n = 2 *defines a geometric plane and that* n = 3 *defines a geometric cube.*

I had stated that when n = 2 we converge on 2 because a plane has 2 sides and when n = 3 we converge on 6 because a cube has 6 sides…but now I can offer more proof using the minimum number of points required to determine specific constructions of solid geometry.

When n = 0 we define nothing.

When n = 1 we define a point.

When n = 2 we have 2 points, which define a straight line.

When n = 3 we have 3 points, which define a plane.

When n = 4 we have 4 points which define a solid quadrilateral. (A cube is a special case.)

When n > 4 we have more than 4 points which can define figures with more than 4 apexes.

Now let us talk about FACTORIALS which are symbolically designated by an explanation point (!).

!0 = 0 {*Calculators usually say that !0 =1. This is not correct, but if !0 were to = 0 all factorials would = 0.*}

!1 = 1

!2 = 2 x 1 = 2

!3 = 3 x 2 x 1 = 6

!4 = 4 x 3 x 2 x 1 = 24

!5 = 5 x 4 x 3 x 2 x 1 = 120

16 = 6 x 5 x 4 x 3 x 2 x 1 = 720

These factorials are the same numerically as the numbers we converged upon when taking power series count differences. This again proves that higher values of "n" greater than 2 will result in higher valued factorials which will not allow the equation $a^n + b^n = c^n$ to be satisfied.

It is debatable as to whether my solution is adequate. My solution states that a defined triangle cannot be inscribed upon the surfaces of any geometric figure which has more sides than a plane *of two dimensions.* If you can accept that premise then you can accept my proof. Of course, since a more academically acceptable proof has now been accepted, my method of proof may be deemed logically correct merely as a corollary to the better accepted proof and my proof may be considered a short cut…I dunno for sure. I wonder what Fermat would say? In the margin of his manuscript he said the proof would be simple … then he died. We don't know if he died trying to prove his marginal claim…If it caused his pulse rate to rise factorially perhaps so. [Page 6]