



ZERO BEAT



AMSAT

Hampden County Radio Association

Springfield, MA

February 1986

ARRL Affiliated, 38th Year

Next Meeting

EMI - RFI - TVI

Interference problems? Come to the February 7th meeting and learn how interference occurs and what steps can be taken to prevent it.

Our guest speaker is Fred Helene, Senior Staff Consultant from R&B Enterprises, in Pennsylvania. Fred has over 25 years experience in the field of Electromagnetic Interference, including equipment design, testing, and solving of interference problems.

Fred will give examples of problems he has worked on, along with explanations of some common and not so common ways it can occur! Problems relating to consumer electronic items will be discussed.

This will be a very interesting meeting. The topic hits most every amateur who has neighbors nearby!

**FRIDAY FEBRUARY 7TH DOORS OPEN AT 7:30 PM, MEETING AT 8!
FEEDING HILLS CONGREGATIONAL CHURCH, FEEDING HILLS, MASS
INTERSECTION OF ROUTES 57 AND 187**

VIP SWEEPSTAKES

The contest was a blast! Many thanks to all who participated. Right now it looks like WINY set a new club record! Send your logs into the American Radio Relay League today! (225 Main Street, Newington, CT 06111) Everyone counts!

Feeding Hills Cong. Church
Center of Feeding Hills
Routes 57 and 187
Doors open at 7:30 PM
Meeting starts promptly at 8:00 PM

Please, no smoking during the meeting! Thank you!



NO SMOKING

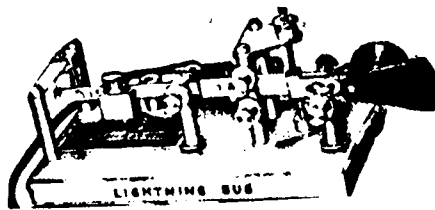
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Dues are \$9.00 per season, September thru June. Please mail to: NIAEH, Greg Stoddard, 1500 Mapleton Avenue, Suffield, CT 06078. Thank you!



MARCONI AND SARNOFF CHANGED HISTORY

In these days of controversy as to the value of telegraphy in amateur radio, it may be interesting to recall what a vital role the code played in the lives of two of our most celebrated radio pioneers, Guglielmo (Billy) Marconi, and David (The General) Sarnoff.

As replayed on page three of last November Zero Beat, Billy Marconi was an accomplished "amateur of electricity" at age 20, in 1894. There were at the same time many others such as Franklin in the U.S., Faraday and Sir Oliver Lodge in England, Branly in France, Braun in Germany, and Righi, his scholarly neighbor in Italy. All were doing similar experiments with "Hertzian waves". Most were established university scientists mainly interested in the pursuit of knowledge. Marconi did not qualify even for college entrance, but what he did know was the morse code.

This knowledge had come about by his chance meeting the previous summer at the Livorno seashore, of a retired "charming old man telegraphist", named Nello Marchetti. Since Nello's eyesight was bad he enjoyed young Marconi reading to him. Nello returned the favor by teaching the eager youngster the code then in use by wire telegraphers. This was the unique qualification: The code and the long lines of connecting wires presented Marconi a clear opportunity to use Hertzian waves for the benefit of mankind via improved global communications. This was attested to by his receiving the Nobel Prize in Physics in 1909 along with Professor Braun of Germany.

David Sarnoff's rise to fame and fortune in this country began as a wireless operator for American Marconi on board ship. All was cw in those days, all in morse code. The forthcoming corporate merger of GE and RCA was nicely set forth in the December 13th issue of the Springfield Morning Union. The three toned musical identity of RCA's NBC are the notes G, E, and C which will signify full-circle reunion with General Electric Company in 1986.

In 1919, GE was part of a consortium that became RCA from assets of American Marconi, which then was producing wireless receivers. Sarnoff, son of a Russian immigrant, must have played his cards well because in 1930 he had risen from pounding brass to become the president of RCA. His keen interest in television research paid off handsomely and by 1940 RCA and the "General" were in clover with their NBC Red network, and ABC Blue network. GE's home entertainment product lines initiated with the acquired Victor talking machine and its dog "listening to his master's voice". The General had proudly proclaimed at the New York World's Fair in 1939, "Now we add sight to sound, with its implications to affect all society!".

So learning the code made a big difference in each of their lives and has affected all of us since then. Wonder which of us today will have an article written in fifty years detailing how learning the code changed the course of history?

de WIKK

RG-8A Coaxial Cable Sale

A limited amount of this high-quality core RG-8A coax is now on sale. Some local stores have been selling poor-grade cable for 37¢ per foot! Our coax is brand new, with 96% shielding. Here's your chance to save some money and get better performance.

Price: 500 foot roll, 18¢ per foot
100 foot lengths, 22¢ per foot

We'll bring your cable to the next HCRA meeting. You can order over the phone, but there is only a limited amount, and prepaid orders will be taken care of first. odd lengths, 27¢ per foot

Mail to: Jeffrey J. Duquette, K1BE
P.O. Box 346
Southwick, MA 01077
Phone: Day 413-730-3253
Evenings (Before 9 pm!) 413-569-6739

Make checks payable to Jeffrey J. Duquette

Loss in db per 100 feet

TYPE	IMPEDANCE	3.5 MHz	7 MHz	14 MHz	21	28	50	144 MHz
RG 8/U	52 Ohms	0.3	0.45	0.66	0.83	0.98	1.35	2.5
RG 8 A/U	"	0.25	0.36	0.53	0.67	0.80	1.1	2.0

Velocity factor of the RG 8 A/U is .81

Good operating habits make satellites fun

Satellite Journal

page 3

by Ron Dittmer, WH6AMX*

From time to time, articles appear that re-emphasize the need for mutual cooperation of all satellite operators to maximize the benefits of our precious resources—the satellites. If this cooperation does not take place, then we all suffer in the long run.

Because of the growing numbers of new satellite operators, it is again time to restate some general principles or rules that we need to put into practice (if not already) as part of our satellite operating habits. It is true that these rules are not binding by law. They are, in fact, gentlemen's agreements that I am sure all of us in the amateur satellite community can live up to.

I would first like to present general operating practices that can be applied to all satellites to maximize everyone's operating enjoyment:

1. The first principle, and one of the most important, is to maximize your receive capabilities. If you are having difficulty copying your own downlink signal and those of others, consider improving the receive system instead of adding more transmit power to your system. Increasing power on a satellite transponder takes away from the ability of the weaker low-power stations to access the satellite. There is no need to run any more power than what is necessary to bring your signal up to the level of the beacon transmissions. Your signal should never be stronger than the beacon. Consider low-loss coaxial lines, bigger antennas, or preamplifiers.

2. Secondly, use a passband frequency guide to approximate your transmit frequency. Do not recklessly swish your transmitter VFO around trying to find your downlink signal. That creates an unnecessary nuisance to operators trying to carry on a conversation. Conversion tables are available from back issues of *Orbit*, *Amateur Satellite Report*, and *QST*. If you are unable to obtain a copy, write to AMSAT, P.O. Box 27, Washington, DC 20044 for a copy.

3. Monitor your downlink signal for a quality check. If you notice problems, check them out. Do not continue operating with known difficulties. One other common problem, especially on AMSAT-OSCAR-10, is the annoying feedback or echo that mixes with the signal coming from the speaker. If not annoying, it sometimes disrupts communications altogether. One way to handle the problem is to either turn down the volume of the receiver while you are transmitting or use headphones.

4. For those who like to chase DX, pileups are an exercise in futility. Don't continue to push up your power to get on top of the pile. Move off frequency for calls. Most DX stations are looking above and below their transmit frequency for calls. There is no need for everyone to get on the station's transmit frequency and see who can run the most power. By increasing your power you will defeat your purpose when you eventually wipe the DX station from the transponder if he is running relatively low power.

Guidelines for OSCAR-10

Besides the general satellite principles, the following specific guidelines apply to OSCAR-10 operation:

1. QRP day is still on Mondays (UTC). QRP means a maximum power output of from 50 to 100 W ERP. That is calculated by multiplying the power at the antenna feedpoint by the antenna gain. For example, $10 \text{ W} - 10 \text{ dB} = 100 \text{ W ERP}$ (acceptable) or $50 \text{ W} - 10 \text{ dB} = 500 \text{ W ERP}$ (unacceptable).

2. OSCAR-10 has five frequency segments reserved for special activities. Four of those segments are known as Special Services Channels (SSC) and are available on a by-reservation basis. The SSCs are set aside for special activities, such as regularly broadcast amateur radio bulletins, educational experiments, packet radio activities, as well as other projects. If you have a worthwhile project—educational or research—you can make use of the frequency with prior coordination with one of the SSC coordinators. Prior permission is essential to avoid conflicts with programs already underway. Everyone should stay clear of the SSC channels to avoid interference with scheduled activities. Some of the channels are

SSC L1 145.830 MHz Packet radio

SSC L2 145.840 MHz CW/RTTY bulletins and experiments

SSC H2 145.962 MHz Voice - Educational and scientific use

SSC H1 145.972 MHz Voice - Bulletins

The fifth frequency segment is the AMSAT Calling and Net Frequency (ACNF). That frequency—145.957 MHz—is set aside as a common gathering spot for satellite information nets, area coordinator activities, and for getting in touch with AMSAT officials. Unlike the other SSCs, the ACNF is not under strict control. However, it is appreciated if users would keep clear of the frequency when it is not being used for the intended purposes.

The set of rules serve as a guide for courteous operation on all the amateur radio satellites. Since the launch of OSCAR-10, there has been an amazing increase in the size of the amateur satellite community. Because of the growing numbers the guidelines are even more important than ever and should be re-emphasized from time to time.

Not every satellite operator will see this article so it is left to you—the informed—to educate the others in the proper operating guidelines. In the same context, many non-satellite operators are working terrestrial communications in the satellite passbands. They may not be aware of what their activities are doing to the satellite community so is again up to all of us to educate those people (in a courteous way of course) to the existence of the passbands and the consequences of their activities. I am sure that they would be more than willing to cooperate if informed. It is with the cooperation of all of us that we will have many enjoyable years of satellite operation.

* 7305D Aloalo Street Honolulu, HI 96818

THE QRP CHALLENGE

Most of us aren't so blase that we don't get a thrill out of working dx-- even though it's fairly easy with a couple of hundred watts into a dipole. But it's especially exciting when you do it with a three-watt QRP rig.

For the purpose of this article we'll define QRP as under 5 watts input -- such as you'd have with Heathkit's HW-8 or Ten Tec's Argonautt. Also, we'll stick to HF operation, where the average ham can count on doing some good long-haul dx when conditions are right, and can routinely ragchew "locals" within a radius of a couple of thousand miles.

I first started flea-power operation with the HW-78 feeding a multiple dipole made from wire won as a HCRA doorprize. The dipole was located 5 to 10 feet above the roof of my downtown apartment. Activity was confined to 40, 20, and 15 meters. My first contact was with an unsympathetic dx chaser in Georgia, who quickly signed at 30 wpm or so. But after that (at least I knew the kit was working) good strong QSO'S on 15 and 20 meters followed, with signal reports as high as 599 from Florida. (I also got a fair share of 329 reports from painfully honest operators, when conditions weren't so hot.)

Then during early morning or late afternoon operation some real dx QSO's would occasionally appear -- Russia, Yugoslavia, Germany, Italy -- enough to make me realize that a better antenna couldn't hurt. So, Tony, WB2HNR, and I slapped together a bargain-priced Gotham quad up about 20 feet above the roof. Results were gratifying, to say the least. The next evening LUIDEH in Buenos Aires gave me a 579. The next week I even had a CQ answered!

On the evening of December 16, the JA's were rolling in, so I blasted out a call to JR1NRP and back he came with a 539. Well, I figured if I could work Japan, I could work Alaska, and KL7HCC came back. He had trouble believing my QRP -- and gave me a 599 from Anchorage.

One morning later on in the month, in a little over two hours, the "seasoned" HW-8 worked, in succession, ZF2AM, Grand Cayman; P11PT, Netherlands; G4FIS, England; EA20P,

Spain; CK1KO, Newfoundland; SMGMG, Sweden; DF8XA, West Germany. And the day after, OH5SS, Finland; UQ2GDQ, Latvia; YU2AAX, Yugoslavia; SM3BDP, Sweden. The dxcc goal now seems possible, with some 35+ countries in the log. Best dx so far is ZL4AX, New Zealand, who gave me a 599 on 20 meters.

About your rig:

Have a good receiver. "You can't work 'em if you can't hear 'em." Have a good antenna -- a well tuned dipole, cut to frequency, will work well and you can avoid using a transmatch, to keep losses down. Use good quality coax and keep the runs short. But for best results, a two element wuad or multi-element yagi will make an incredible difference. And get your antenna up in the air, in a relatively clear location. Homebrew projects are particularly inviting -- many hams tailor-make their own QRP gear. Have extra audio filtering available for bad QRM times.

About operating:

Dust off your key and polish up your operating skills. Know your abbreviations and Q signals. Forget about calling CQ-- aside from being one of life's more boring activities, it simply isn't effective for QRP work. Listen, answer CQ's, and listen some more. And sometimes best of all, sneak in a tail-end call before the kilowatts in Indiana notice. Operate regularly and be patient and persistent. Try listening at different times of day. Operate when those kilowatts in Indiana are in bed. Don't call just the strong signals -- often a distant station can copy your 3 watts just as well as you can copy his 200 watts. Try contesting -- you can really rack up the contacts when they are looking for you.

In this article I've taken for granted that you're a c.w. person with 20 meter privileges. And that's where you'll find the most consistent dxing. But Novices and Technicians will find 15 meters an excellent dx band when conditions are right. 10 meters also seems like a good possibility.

I think the "QRP Challenge" really epitomizes what is best about hamming. So give the local repeater a rest (a one-watt hand-held worling through the repeater is not QRP!) and start some QRP dx chasing. And if you hear me in a QSO with a ZS6, don't tune up on top of me!

de N1FJ

RADIO MEMORIES BY WIMM

Early "Wireless" Interest Prior to WWI

One of my friends had an older brother who had a spark transmitter and a crystal detector receiver with which he could communicate around town. This greatly intrigued my friend and myself. We attempted to build smaller versions of this station and copied equipment as shown in Boys Life Magazine, without any real success other than learning the Morse Code.

WWI Wireless Operation

While attending Hastings, Neb. High School in the fall of 1917, all male students were required to take military training in the Student Army Training Corps, and drill for one hour each morning before regular classes. Our Physics professor was one of the drill instructors, and informed his classes that anyone interested in Wireless would be assigned to a special Signal platoon, and thereby get out of the regular infantry drills. He had no trouble getting recruits and thus in place of drilling, our drill periods were taken up learning the code and code practice. The class also put together spark coil transmitters and carrying handles. As part of the morning drills, this "portable" equipment was carried a few blocks away and communications back to the base station in the Physics lab were made. This training continued up until the end of the war.

Post WWI Wireless Operation

After lifting the ban on Amateur Radio, our Physics class instructor obtained a school radio club license with the call 90T. Along with most of the other fellows in the class I obtained an Amateur Radio Operators license. We spent many hours at 90T operating its 1/2 KW spark transmitter. In the mean time I had put together a 1 inch spark coil transmitter and a crystal detector receiver, and soon obtained my own license 9AVC. To the best of my knowledge and from notations on photographs of my station, this license was issued late in

1919. Late that year I put together a 1 Kw spark transmitter, with home built rotary gap, and photographic glass plate with tin-foil and immersed in oil for the condenser, Thordarson transformer and pancake oscillation transformer. Antenna was a 4 wire flat top up about 45 feet. The receiver was a one tube Audion which had double filaments (one a spare) and homemade spider web coils.

The homemade rotary gap was very noisy and was soon replaced by an enclosed Benwood gap, and the receiver grew into a good sized one with detector and 2 stage amplifier. I have photos of this rig captioned "Bob" and "His Bug", 9AVC, 1919-1920.

In the summer of 1922 the spark set was scrapped in favor of the new mode CW. A transmitter using a pair of 203s was constructed and a new receiver using a "Reinartz" tuner and several stages of audio replaced the older receiver. Needless to say, this equipment ran rings around the older spark outfit. Now in place of only a few hundred miles, it was no problem working with either coasts. The rectifiers for the HV power supply were so called "slop jar" rectifiers made up of aluminum and lead strips immersed in a solution of water and soda. These created quite a visual effect with a scintillating glow on the electrodes as the power supply was keyed. Voice communication was also possible by modulation of the carrier by means of absorption loop modulation with parallel carbon microphones in series with the loop and inductively coupled to the antenna coupler coil. 9AVC went QRT in 1924 when I went away to the University of Nebraska at Lincoln.

Post College Radio Amateur Activity

Upon graduation, I was employed by the General Electric Co. in Schenectady, N.Y. as a test engineer and upon completion of the test program was employed as a regular Electrical Engineer. Shortly thereafter I was married to my present XYL who was also from Hastings, Neb. With a permanent place of residence, I again turned to Ham Radio and obtained a new call, W2AEW. I started off again with a home brew rig using a UV210 and a SW3 receiver, also home brewed. I guess none of my rigs ever stayed the same over a few months, as I was a dyed in the wool builder of both transmitters, receivers, and antennas.

In 1935 GE transferred me to Pittsfield, Mass. where I soon received the call WJLT. Later when the call WIAEW was vacated, I applied for it and held that call for some time. After obtaining my Extra Class license, I applied for a two letter call and got WIMM in February of 1969.

In 1955 GE transferred me to their Holyoke, Mass. plant. I retired in 1967 after being with GE for nearly 40 years.

My main Ham Radio interests have been CW work, building all kinds of equipment and antennas, rag chewing, radio club work, DX and contests, some traffic work and a very little of phone and UHF activity.

Now that I am retired, had hoped to have more time for Ham Radio, but find that I spend about the same amount of time at it, as I did when working a regular job. Other interests and hobbies seem to be taking up the slack that was available when the regular job chores ceased.

Robert N. Stevens, WIMM, Amateur Extra Class License

Ex 9AVC, W2AEW, WJLT, and WIAEW
First Licensed Amateur Radio Operator 1919
W.A.S., W.A.C., W.A.Z., DXCC #321
QCWA #3156 OOTC #416



ZERO BEAT NEEDS YOUR ARTICLES!

CLUB CALL: WINY

As a result of some diligent efforts by our immediate past prez Ted, WA1GZO, the club was fortunate in being issued WINY by the FCC in April of 1976, with yours truly as an extra trustee. It may be well to recall during the season of festivities and celebrations one of our more active, founding members of the Association who became silent key in his sleep shortly after his retirement from the local gas company. Hank Baier, WINY, 1902-1971, was first licensed in Chelsea, Ma. circa 1918 as W1KK. As a youngster he worked in the pioneer radio factory that made the famous Murdock Earphones and other vital accessories. From line out of Boston during which he acquired that inimitable Banana Boat swing to his cherished CW fist.

In 1926 Hank transferred to the Springfield area to begin his 44 year career as chemist for the gas company, then producing its own gas by converting coal. Hank's chemical duties phased out with the coming of the Tennessee Pipeline natural gas line at about the same time that they were introducing two way radio into his company's trucks. The writer recalls many spirited semi-technical bull-sessions in the little red brick building near the Page Blvd. storage tank that also served as the antenna support. The gas company will probably never know that they contributed substantially to reduction of TVI in our Ham community via Hank and his instruments during those early, strenuous weak signal TV days and open chassis 10 Meter amplifiers.

I am sure that there are a number of us in the club who admired and were inspired by the Mohawk Park Field Days and church hall banquets in Wilbraham and dedicated life long interest Hank had for the Hampden County Radio Association.

In 1967 the club honored Hank with a testimonial and plaque for 50 years of Ham Radio in the public interest.

Art W1KK

Reprinted from Zero Beat, November, 1979

HOW TO ACHIEVE 25 WPM PAINLESSLY (ALMOST)

The following ideas are what may appear to be relatively unorthodox methods to achieve code proficiency. They are not intended to be shortcuts and may not work for everyone. However, when all else fails, they may be of some reinforcement when used with some of the more accepted methods of achieving higher code speed.

Many hams (and prospective hams) regard code as a major stumbling block; whether to get a license, upgrade to a higher class license, or just to increase code speed. Morse code should be pursued as a challenge rather than a chore. Regardless of the method used, a positive attitude toward code proficiency must be maintained and it should be considered somewhat enjoyable.

The first method is based on my theory that there is no need to copy a transmission letter for letter during the course of normal QSO (except for handling traffic). Just as a college student must learn to listen to a lecture and learn to take pertinent notes, the ham can do the same; copy the text in your head and make notations as necessary. ...Which brings us to the new type of FCC code tests where questions are asked on a "typical" QSO.

Your first biggest fear is letting go of your pencil when it comes to copying. Like the first time on a bicycle, you know you'll learn how to do it but that first push off the curb and neither foot on the ground does nothing for the blood pressure. So, let's take a more relaxed approach to this method. Turn on your receiver and find someone who is sending just a little faster than you can receive. Impossible as it may seem, try to find someone wh a good fist.

Put your pencil down, fold your hands on your shack desk, and put your head down and close your eyes. Don't go to sleep!! Listen as he sends. At first you'll only pick up a character here or there. Don't get discouraged - you won't be proficient in just one session. Gradually the characters will turn to words and somewhere down the line, you'll be able to copy the whole transmission. Now you're listening to a conversation - not scribbling feverishly to

copy everything and trying to decipher it all as he sends HW? WINY DE KIHAM K. When you can copy this way at the speed you wish to achieve, it shouldn't be much trouble at all to make notations on signal report, QTH, name, etc. The crux of this method is you only write down pertinent information leaving out words - such as ands, the's, here, etc.

For most of us, the goal is to pass the FCC test for the class license desired. When you take the test, just listen to the one minute practice tape instead of writing it down. It will allow you to get used to the pitch, speed, and not to be all tensed up when the test portion is sent. It may even psychologically help you to pass as you watch everybody writing like mad during the practice tape and being half "burned out" by the time the test portion is sent. The test is simulated QSO and you only have to answer questions on what was sent - no longer the requirement for 1 minute solid copy out of 5 minutes sent. "ERGO" the previously described method. For example the test may be: I teach psychology at UMASS and live in Springfield, MO. It may not make sense but copy what was sent. They may ask you what his profession is and your choices would be: psychology teacher, psychiatry teacher, philosophy teacher, philanthropy teacher. The underlined words are the pertinent words and should have been what you wrote.

"How do I know what to write down?" you ask. By now you should be able to copy a word or two behind what is sent; which brings us to my theory of not writing down what is not necessary.

If the above method offends you or you don't wish to put down your pencil, the following may help you to increase code speed. Try chasing the DX. Not only will your code speed increase, but you'll learn to pick one signal out of a myriad of others. Maybe you'll even snag that exotic country that you didn't even know existed. DX QSOs are pretty much formatted. For example: WIACQF DE UD6HAM UR 579 579 QTH AZERBAIJEN NAME VLAD VLAD HW? WAICQF DE UD6HAM K. Even though you know the format of the transmission, you really can't anticipate the actual contents of the text. You'll have each word sent twice. After a short while of operating, don't be surprised if you're working stations sending 20 to 25 wpm.

The above are what I call "learning by osmosis" i.e., you become proficient at what you enjoy. So.....relax a little and enjoy CW ... have conversations instead of exercises in writing letters and numbers on a paper. Don't forget to practice your sending (not on the air). You're judged by your fist. Good luck and QRQ.

Gent Lam WAICQF

The Hampden County Radio Association will continue to offer ARRL/VEC FCC exams, open to the public. We have scheduled a number of exams in advance for 1986. These will be held at the Wilbraham Hampden Regional High School, on Main Street in Wilbraham, MA. The dates are as follows:

15-Mar-86	Saturday AM	24-May-86	Saturday AM
09-Jul-86	Wednesday evening	13-Dec-86	Saturday AM

In addition, the HCRA will help those who are interested in an upgrade exam but unable to attend one of the HCRA or other local sessions. The VEC rules allow unannounced exam sessions of five or less. If you can't make it to a public VE session, we'll come to you! Contact Yorke, K1BXE, Bob KA1KPH, or Steve, WA1EYF if you would like to schedule a VE session.

EDITORIAL BY KIBE

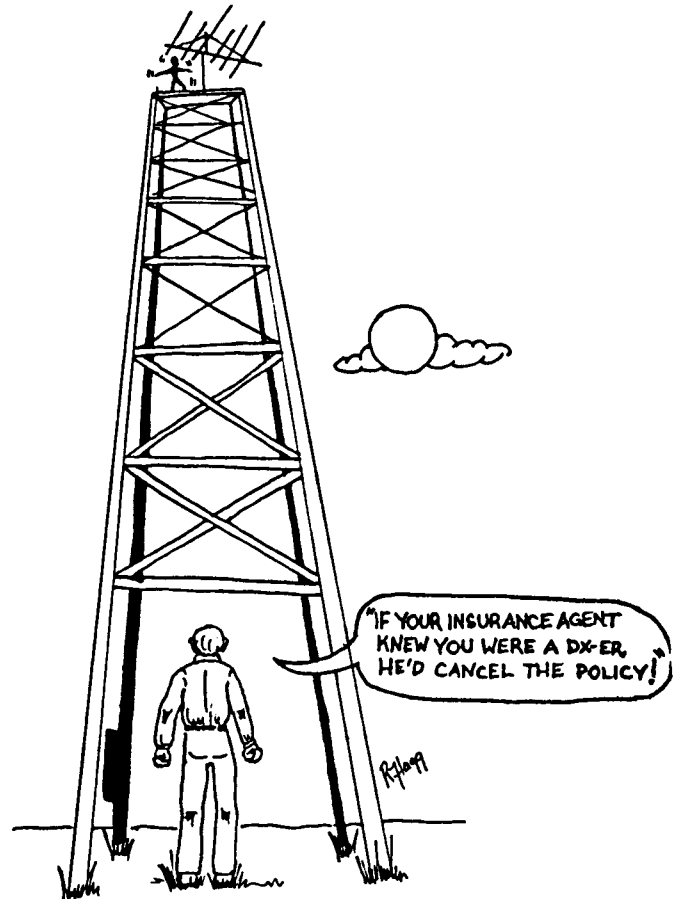
FOR YOUR INFORMATION:

The editor of Zero Beat does not have anything to do with mailing of the issue, or the mailing labels. (The way your name and callsign appear on the mailing label is how it would be typed on any awards, etc you might receive from the club!) If you have a problem with the mailing, contact Bob McCormick at 413-786-7966. It will be promptly taken care of. If your mailing label is wrong, contact Ron Beauchemin c/o the club address, and he'll quickly fix it.

Articles for Zero Beat that arrive up to the 15th of the preceding month will usually get in the next issue. Anything that comes in between the 16 and the 20th might get in. Anything after the 20th does not normally get included. There is no charge for members ads, but if its a big one, send along a donation. Postcards are preferred, and the ad will be typed just the way you give it. (If you don't include a phone number, I assume you don't want one with the ad.) I assume no responsibility for phone call ads, because I tend to scribble them on the nearest piece of tissue and promptly lose them.

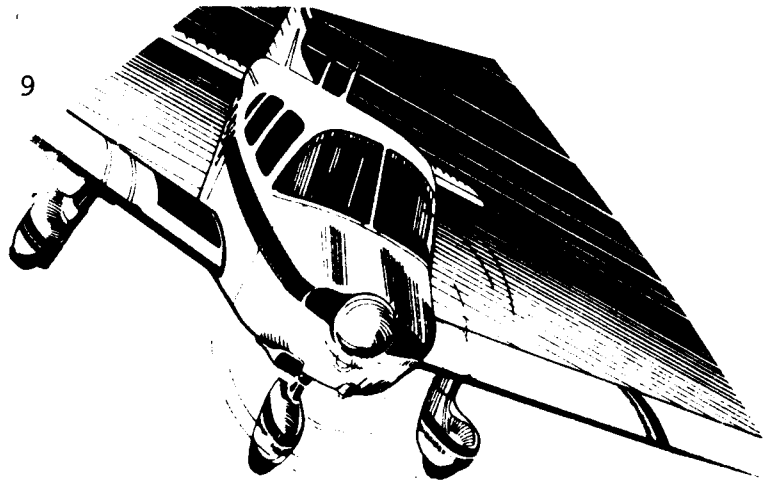
If you like an article in ZB, tell the writer, or the editor. If you don't like something, the only way I want to hear from you is by letter, which I'll re-print, unless it is unsigned. **NO PHONE CALLS.**

Jeff, K1BE, Yon ZB Editor



LICENSE CLASSES

As we go to press, the HCRA is planning to again offer license classes. We have set the dates of 04-Feb-86 through 20-May-86 for classes to be held at the Agawam High School, each Tuesday night from 07:00 to 09:30 PM. We would like to offer classes from Novice through Extra, but at this time expect that we will only have enough instructors for the Novice and Tech/General classes. A ARRL/VEC exam will follow the classes on 24-May-86 in Wilbraham. If you could help out with the classes as an instructor, or would like to take a class (or know some one who would), please contact: Art, W1KK; Bob, KA1KPH; John, AC1T. Stay tuned to local repeaters for more information on the license classes.



Thanksgiving Day 1985
By Dick Goodman, WBIHH, SEC, W. Mass

After two unsuccessful attempts to turn off the alarm clock at one o'clock in the morning, I discovered that it was the telephone. George Sarrouf, teacher at McCann Technical High School and local Civil Air Patrol Commander, told me that he confirmed an ELT (Emergency Locating Transmitter) had been activated. Earlier that evening a local pilot had been taken to Berkshire Medical Center. He had been found wandering and dazed within the Heritage State Park in North Adams. The pilot was incoherent, knew nothing of an airplane crash and thought that his airplane was in the hanger at the North Adams airport.

Major Sarrouf requested that I alert Paul Howcroft (WALZFK) to be prepared for a possible morning direction finding effort with Paul's frequency sensitive voltmeter. He also requested four additional ham operators to provide communications for the research and rescue teams which would be assembled at the airport at 7 a.m. I called Paul and advised him of the situation so that he might get whatever equipment he felt necessary ready for the morning assault of the Mount Greylock Reservation.

Now time to get back to bed. Not on your life. Sure it's the middle of the night and we're getting a mix of freezing rain and sleet, but there is a lot that can be done even at two in the morning. Put on the coffee pot, turn on the computer, and run the NoBARC Club Program to see who could be in a key position to help. I wonder how phone calls at this hour are going to go over on a holiday?

Hi Dan (WIHER). I know you have a scanner. Will it cover 121.5 MHz and can you sweep Mount Greylock from the south with your 2 meter beam to see if you can detect the elt? Most NoBARC club members know that Dan is a pilot. Dan notified me within a few minutes that he could not hear the elt on the south side of the Greylock Reservation. Half of the job is done.

Next call was to Brian (WBI EYL). I was lucky. Brian had just gotten home and Eric (KSIN) was with him. I asked them to get their batteries on charge and I'd call them later to let them know what time they would be needed at the airport.

A few more phone calls to hams who might have a programmable scanner that could put the scanner on a beam from home to determine an approximate direction of the elt. I called officer Thompson of the Williamstown Police Department who first reported the elt to the North Adams Police and he confirmed that the elt was still activated...

The next call was to Charlie (WBI EWL) Benoit in Williamstown. Charlie had a scanner and was a pilot but could not get the elt on his scanner. I asked Charlie if he wanted to go for a ride with his scanner. Charlie made up a power cord for mobile operation and we took off toward the airport at approximately four a.m. We put the scanner on my 2 meter Larsen and immediately got the elt. The strength of the elt got stronger as we approached the airport. By this time the pilot, still incoherent, thought that the plane was parked in the hanger. He still knew nothing about a plane crash. Our previous elt experience was an elt going off at the airport on a parked plane. As Charlie and I approached the airport the signal was not that strong. We continued passed the airport and the signal faded. We got a very strong signal at the bottom of Notch Road where it intersects with the Mohawk Trail. As we continued passed the intersection the signal again faded until we lost it at the Western Gateway Heritage State Park, where the pilot was found. Charlie and I continued to make a sweep of North Adams east side with no results.

Back to Notch Road and Mount Williams in the Greylock Reservation. As we climbed toward the Mount Williams Reservoir the signal increased and the external antenna was replaced with the collapsible scanner antenna. We took a left and proceeded to Bernard's Farm at the entrance to the Greylock Reservation. We actually lost the signal at that location. We proceeded back to the reservoir and at telephone pole location 62 we could not squelch out the elt signal with the antenna fully collapsed. We continued westerly and the signal decreased. We went back to the airport and went in to see John Hockridge at New England Weather Associates who had a portable multi-band radio with a directional antenna on top. He determined that his best elt signal was in the direction of Mount Williams Reservoir (about a mile south-easterly of the airport).



It's now about 5 a.m. and starting to get a bit light. I took Charlie home, called Major Sarrouf, Paul (ZFK), Brian (EYL) and Eric (IN) to bring them up to date. Major Sarrouf said that activities would get started after 7 a.m. at the CAP building. He had called the Adams forrest wardens, Berkshire Mountain and Rescue Team, Civil Air Patrol personnel and the Department of Environmental Management. These teams were all familiar with the north side of the Mount Greylock Reservation.

Now for a base control station. Who else, but Warner Smith (WIYBT). After securing his work release papers from the "jail" (see November squelch tale), he indicated that he would be at the airport in time to start the operation.

It's now 7 a.m. Paul (ZFK) is already through the gates to Mount Greylock. With his direction finding equipment he was able to determine that the plane was not on the east side of Notch Road nor was it anywhere near the summit of Mount Williams or Mount Fitch. We now have the crash site determined to be the road on the south-east and Prospect Mountain on the south-west. Paul (ZFK) met the first search team approximately two miles below the intersection of Notch Road and the Appalachian Trail. Warner (YBT) was set up at the CAP headquarters and Brian (EYL), Eric (IN) and myself (HIH) were each assigned to a different team to provide communications back to Major Sarrouf.

Paul operated the direction-finding equipment that located the signal from the elt and helped pinpoint the area of the plane. There was heavy snow in the woods and the snow was still falling. According to Paul, the "DF" efforts were hampered as the signal bounced off the surrounding mountains and the elt antenna on the tail of the plane was pointing straight into the side of the mountain. Paul indicated that the way the plane was lying, it was beaming the signal up the mountain. It was hard to get the signal when the direction is not vertical but horizontal because much of the equipment used by the Civil Air Patrol will not pick up the horizontal signal properly. Paul's equipment, however, was able to zero in on the elt signal.

The twin-engine Piper Aztec was found at 10:45 a.m. on Thanksgiving morning by the team which Paul (ZFK) had led with his "DF" equipment through the woods. The team with Eric (IN) met that team a few minutes later. Permission was given by Major Sarrouf to Paul (ZFK) and Eric (IN) to deactivate, remove and return to elt CAP headquarters.

In final notes, the press coverage of NoBARC efforts in this "mission" were fantastic. Paul (ZFK) got his picture at the crash site on the front page of the North Adams Transcript as well as a side-bar about all the volunteer efforts of the local searchers. The Berkshire Eagle and Springfield Union also carried front page center stories about the crash and many mentions of the Northern Berkshire Amateur Radio Club. On day later, our NET control station, Warner (YBT) had his picture on the back page of the communications center.

DO YOU REMEMBER?

31 YEARS AGO:

Bill Ham, WIRRX, has a skunk invade his cellar shack while he is operating.

WITAY works Holyoke to Milwaukee on 75m mobile.

Ike Creasor or Uncle Dudley as he was affectionately called passed into the Silent Key band December 21, 1952. Many will remember him.

WINY resolves to "Hoss-trade" bigger and better deals.

26 YEARS AGO:

117 members in the HCRA.

WIRFU, Bill Rosner gives a talk on crystal converters.

WIDGA worked Sweden on 6 meter phone.

Wes Thayer, WILRE, and Art Zavarella, WIMNG, brewing the coffee and donuts for club meetings.

Norm Forest WISTR was once K2CPZ. (Now NIPF)

Bill Kirby, WIBCI, using key he homebrewed in 1933.

21 YEARS AGO:

HCRA visits Western Mass Electric's 200,000 kw plant in West Springfield.

Howard Gurney, WIIC, off the air, even though he has three transmitters-what happened?

Santa Claus brings the phone patch to George Dougan, KIPMK.

Taken from December, 1967 Zero

CONGRATULATIONS!!

Lad Nagurney, WA3EEC, received his doctorate in Physics! Great going!! (But does he have DXCC? No-o-o!)

FREE, TAKE IT AWAY: Sturdy desk with 3 side drawers, center drawer, and raised podium for radio. Needs some refinishing. C. Norman Peacor, K1IJU 413-267-3266 (Monson)



President's Corner

Bob McCormick KA1KPH

Greetings! I hope each and every one of you had an enjoyable holiday season and best wishes to you all in 1986. Things have been quite busy for me, and the club too. I've been running around racking up frequent flyer bonus points hoping that some day I'll have enough to get to a nice DXpedition location. The board has been quite busy with a number of topics over the last few months.

The top priority of the HCRA, as set by a board decision a few years back, is education - license classes. This, in conjunction with the ARRL/VEC program, provides any individual with the desire to obtain a ticket the vehicle to go from Novice through the Amateur Extra class. I am happy to say that the recently completed classes had many candidates enter our hobby, as well as even a greater number upgrade their tickets. Congratulations to all!

This program takes a great deal of time to support, and it can only be continued through volunteers donating time to these efforts. We are in need of additional instructors for all license classes. If you are interested, please contact myself, or Art, WIKK. If you hold the Extra class ticket, you may wish to participate in our exam program, through the ARRL/VEC. We strive to offer top quality examination sessions, and need lots of help to continue to meet our goals. Please contact Yorke, K1BXE, for more information.

We realize that not everyone can make our license classes or VE exams. Although we don't have the volunteer support to supply one on one tutors, we can offer special considerations in the volunteer exam programs. Starting soon, if you can't come to us, we'll come to you! See elsewhere in this issue for more information.

The repeaters have been a time consuming issue as of late. I've heard many comments and even a few questions regarding "what's going on?"

As you should know, the HCRA has entered into an agreement with a number of repeater owners to provide various kinds of 'repeaters' to the general membership. This seems to be the best way to make high-tech communications systems available without the expense of owning and operating by the club. Four agreements are currently in force, voice machines on 2m and 70cm, as well as ATV and packet.

These agreements have the provisions for the club to assist the trustees and owners in raising money for expenses, maintenance, and upgrades. The structure of the additional 'dues' was set up for this purpose. Although we created the ability to take in funds, we had not created any guidelines on the disbursement of them on behalf of the repeaters.

As you may well imagine, the issue on how to allocate funds (spend money!) was not a simple one. There were many different feelings on the board, and the solution was not very simple. The board works like a close family, controlling all aspects of the club. This issue, like that which may occur in many families, had many board members split with contrasting opinions on what to do.

It has been a rocky few months, but I believe that we've got something that will cover all the bases. Through the efforts of Steve, WA1EYF, and other board members providing input, a charter for the repeater sub group has been created. The final copy of this document will be presented for approval at the next board meeting. I will highlight this document in my next President's Corner.

Running a club that is as diverse as the HCRA is not an easy task. If we were just a repeater club or DX club the task would be much easier, as our thrust would be only in one direction. To be just a general amateur radio club and cover all aspects of the hobby requires a great deal of time and effort by many individuals. Even if you have nothing to offer but your opinion, please come forward and speak. Without your feedback, myself and the rest of the board have no measurement to judge whether we doing our jobs.

NEXT MEETING: FRIDAY FEBRUARY 7TH EMI - RFI - EMI

FOR SALE: TRS-80 computer with Mactronics TU and tape recorder. This is a complete RTTY station. Florian DiRoma, K1EPI, 667 North St, Feeding Hills, MA 01030

FOR SALE: YAESU FT 101E, High Frequency Transceiver, with Murch Transmatch, Heathkit SWR meter, Heath cantenna, \$400.00 413-592-4354 Al after 4 pm.

FOR SALE: KENWOOD TS 830S cw matched pair of 500 hs filters, \$600.00 VFO 240 analog type, \$100.00 ron K1BW 413-536-7743

FOR SALE: KENWOODS TS 520S \$325. Cw filters, 500 & 250 hz, \$50. pair, MC50 desk mic, \$35.00, Heathkit keyer \$42.00, Hanco Iambic paddle \$38.00 Package for \$450.00 NIABJ Bob Roy 413-534-1227

FOR SALE: Hallicrafters general coverage receivers, 500 kc thru 6 meters, SX71 \$65.00; 500 kc thru 10 meters S38D \$35.00, aligned and excellent operation, K1JDY Archie 413-536-4578

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