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12-91

Zero Beat

Hampden County Radio Association, Inc

Springfield, Mass

Our 44th ARRL Affiliated Year

President's Corner

Greetings!

I hope that you had as good a time at the auction as I had. Jeff did an excellent job as auctioneer, and some people got some great bargains.

Over the past several years, the club has published a survey in *Zero Beat* that we have asked you fill out and return to us. This survey has helped us make some very important club decisions, most notably the decision to change our June banquet style. This year, we chose not to publish a survey in *Zero Beat*. But this does not mean that we don't want your input! If you have any suggestions for the club, please feel free to contact any of the board of directors. You may also call me on the telephone, my number is (413) 736-0178. If you get my answering machine, please talk to it... The tape is 30 minutes long, and you may leave a message that length if you like! Some people have been calling my machine and not leaving a message... I hate to think that it is a club member with a suggestion who is afraid to leave a message!

At our September meeting, Joe Reisert, W1JR, gave a talk on some of his experiences with amateur radio. I'm sure we all have some stories that we'd like to share. At our December meeting, you'll get a chance to do just that. Bring a unique QSL card that has a story behind it. The December meeting will be a social hour; You can show your QSL card to other members, and tell them what makes the card so special. You might want to make an effort to tell about your QSL to a club member that you haven't had a chance to chat with in the past.

Bob Lafleur, NQ1C

Next Meeting:

Friday, December 6th
Feeding Hills Congregational Church
Feeding Hills, MA

Intersection of routes 57 and 187

Doors open at 7:30 pm, meeting starts at 8 pm

Bring a unique QSL card to show off!
Bring one of your own QSL cards for a fun raffle!
Socialize with your friends!

In This Issue:

How W1MNG became W1KK
Ancestry of the Hampden County Radio Club
Antenna Antics
Radio Memories
Jamboree on the Air
CQ DX!

Upcoming Issues:

Special VHF Sweepstakes Issue!
Marconi Memorial Issue
Radio Clubs of Western Mass
Russian Radio Operations
Blizzard of '78

The Ancestry of the Hampden County Radio Club by

Tom Barrett W1KUE

Author's Note: The following is not meant to be a history in the documented sense. I have no documentation, memory is my only reference. On that basis, here is some background to lay a foundation upon which a history may rise.

The club's antecedents lie in the 1920s. Before World War II this area was the locale of three radio clubs. In alphabetical order they were: The Connecticut Valley Radio Club (CVRC), The Springfield Radio Association (SRA), and The Western Massachusetts Radio Club (WMRC). Each organization revolved about a pivotal character, and the rivalry, clash of personalities, and at times, temper flaps were a sight to behold. The three colorful characters involved were: Archie MacLean, W1JQ, of the CVRC; Ike Creaser, W1UD of the SRA; and Lou Richmond, W1AVK, of the WMRC.

These clubs had their periods of wax and wane; first one then another would grow, dominate the scene, and be replaced, only to rise again as circumstances allowed. As I have indicated, personalities played a part in this process, and hams switched from club to club as the spirit moved them. In those days the ham population of this area was about one hundred and fifty and perhaps sixty or seventy of them belonged to one or another of the local clubs. In addition to the advantage and disadvantages of having a "strong man" in each club they shared another common disadvantage. Their meetings were bogged down with the nitty-gritty of club business, and it sometimes seemed that the less important the subject the longer and more acrimonious the discussion. The result was more hot air than program at club meetings. Decisions were based more on who supported what viewpoint than on the facts of the matter under consideration. Each club maintained permanent quarters. The CVRC rented space downtown, the SRA met in a building at W1UD's QTH off upper State Street, and the WMRC had the use of facilities at Springfield Airport on Liberty Street. All three had station equipment, sometimes operable - sometimes not. Given the above situation, and method of handling club business, it should come as no surprise that the clubs were unable to support, on a continuing basis, more than a core group of a few members, and were beset by financial problems.

At this point I believe it necessary to insert a personal note or two to assist in maintaining perspective. I knew W1JQ, W1UD, and W1AVK personally, and valued them all as personal friends. I was closest, however, to W1JQ. I joined CVRC in 1932, and in time became its Treasurer. I attended meetings of the other clubs when time permitted, and base my observations concerning their operations on that, and on discussion with friends who were members of SRA and WMRC. If my recounting of "the old days" is subjective, so be it.

The circumstances set forth above remained substantially constant from the early 1930s until December 7, 1941. Pearl Harbor shut down ham radio for the duration, and most hams went either into the military or to work. Between 1942 and 1946 the War Emergency Radio Service (WERS) on 112 Megacycles provided some quasiham operation for those available, but this period had little effect on our story. All three clubs died and were never to arise again.

By mid 1946 most of those hams who were coming home had arrived. The pre-war group was augmented by a large number of service trained operators with an interest in amateur radio. The VHF bands were realigned; five meters became six meters, two and a half meters became two meters; the higher frequency bands also were revamped. Two meters was the lowest frequency band on which simple equipment (read that as "modulated oscillators") was allowed, and where superregenerative receivers gave acceptable performance. Everybody and his brother appeared on the low end of two meter and it was here that one of the factors leading to the forming of the Hampden County Radio Club developed. As hams will, a rag chew net was established, and fellowship became rampant. Visits to each other's shacks, gatherings at various oases, and eyeball QSOs at radio stores, etc., brought old timers newcomers into contact. A good time was had by all (or almost all).

A second factor was a small group of former CVRC members who got together from time to time to shoot the breeze and quaff a brew or two. It consisted of W1JQ, W1FOF, W1KU and occasionally a few others. They could sense a need for a ham club; therefore, in the spring of 1946 a representative group of hams was invited to meet at W1KUE's QTH to discuss possibilities. Among those present, in addition to JQ, FOF, and KUE, were W1s, OBQ, OJV, IOL, NY, JWV, IC, MNG, KFV, and others whose calls I have forgotten. Agreement was quickly reached that a ham club was still active and a factor with which to reckon. It quickly became evident that the current crop of hams would not support a club that spent the majority of its time and efforts haggling over routine business, and the bugaboo of where to find seed money reared its ugly head.

W1JQ made the first move. He proposed that he, W1UD and W1AVK step aside as possible leaders of any ham club evolving from this meeting. It was the consensus that a type of organization in which a Board of Directors would be responsible for routine club business was the answer to the lack of meeting program time. As for seed money, this would be forthcoming if the "strong man" problem could be solved. In anticipation of such a solution W1NLE and W1KUE were designated to draw up a Constitution and Bylaws for consideration, another group agreed to present W1JQ's proposal

to W1UD and W1AVK, and a third would deter a course of action leading to an organizational meeting of all interested hams.

To the surprise of all, or almost all, the "strong man" problem proved the easiest to resolve. W1UD and W1AVK joined W1JQ in the "include me out" declaration. Gil Williams, W1APA, well known in local ham circles but without previous local ham club affiliation, was persuaded to accept the position of Chairman Pro Tempore of an organizational meeting, and spokesman for the sponsoring group. W1KUE was named Secretary Pro Tempore. Those who could afford to do so put up various sums to defray initial expenses, and the work started. By this time the ham population of the area was three hundred to four hundred, and contacting all of them could best be accomplished by mail. Post cards were purchased and mimeographed, a brand new Call Book was sacrificed to the cause and the W1 section ripped from its moorings to be divided among the volunteer post card addressers. Any ham listed in the book as living in an area bounded on the north by North Hampton, on the east by Palmer, on south by Enfield, Connecticut, and on the west by Westfield was sent a meeting notice. The Western Massachusetts Electric Company auditorium on lower State Street was reserved for the meeting. At this point, the early fall of 1947, if memory serves, all one could do was wait and hope.

The fateful evening arrived. More than a hundred hams converged on the WMECO auditorium, and once the "long time no see" eyeball QSOs were quieted down the proposal to form the Hampden County Radio Club was put forth by W1APA. Those of us who remembered pre-war club meetings felt right at home. At times several hams were addressing the body simultaneously, and one small group left the auditorium in protest over some real or imagined affront. (As I recall most of them straggled back to the hall in time for the final vote.) In the end what happened there is history. The proposed Constitution and By-laws were adopted, albeit somewhat altered. W1APA was named President by acclamation and W1KUE became Secretary by default. The positions of Vice President, Treasurer, and Directors were filled, but memory does not furnish their names or calls. The fact that the Hampden County Radio Club survives and is active some forty years after its launching is a tribute to those who recognized the shortcomings of its predecessors, and managed to avoid or minimize those shortcomings in the establishment of the Hampden County Radio Club.

Junkins Cops Bronze Medal

Cliff Junkins, known to club members as W1UWX, age 64, and a U.S. Navy veteran, won a bronze medal in the men's quarter mile bike racing event at the Fifth National Veterans Golden Age Games held in St.

How W1MNG Became W1KK

By

Art Zavarella W1KK

It was back around 1953, a year or so after the Extra Class became available that I had occasion to visit 1600 Custom House Tower in Boston with some friends we had been helping to upgrade to General. I went along for the ride, and to provide a little moral support to our adult but nervous students. While browsing around up there enjoying the views of Boston from the sixteenth floor and the busy harbor of tea party fame, my eye caught a little notice on the FCC bulletin board inviting qualified hams to take the Extra.

I knew the 20 word per minute code test wouldn't bother me, but all those sophisticated theory questions, schematics, rules, and regulations. Without any prior expectation of taking the test, much less preparing for it, I decided to give it a try, so that at the very least I'd have a preview of what to study for later on.

The first part of the test was the code. No problem receiving the nice 20 WPM machine. Then the FCC guy said, "Oh yes, you also have to send 20 WPM; do you have your key?" Seeing as we were all the way from Agawam, politely, of course, I said, "What key?" He consented to look for a key I could use, and in a few minutes handed me a little, stamped metal cheapie and said "Here you go!" This turned out to be quite a challenge. I flunked the first try, but after a little practice he reluctantly allowed, I finally made it, but not without a little sweat. The subsequent theory part was taken in stride, so the ride to Boston had been fruitful, but there were then as yet no privileges for the Extra ticket.

Some years later they came out with some concessions for the Extra, one of which was for a \$20 bill, you could get a 1x2 call mail order. This I did, and within a week or ten days, W1MNG was gone, replaced by W1KK. As a CW nut, I welcomed the "Go! Go!" call and have been taking ribbing from my MNG friends ever since. A curious thing about the KK call is that I knew Tom Chapman the previous holder quite well and had worked him a number of times from his Bondsville QTH and later, West Springfield, before he passed on. I was later told by Hank Baier, W1NY, while he was alive, that he had been the original assignee of 1KK at his home town of Chelsea. You see now why KK has a little sentimental meaning to me, and why I am proud to be trustee of the memorial club call of W1NY.

Petersburg, Florida. Participants are all veterans 55 and older who receive Veteran's Benefits. The idea is to show that no one is too old or to sick to benefit from physical activity. Well done, Cliff!

Antenna Antics

By

Paul Kress WA1ZKT

The virtues of using 300 ohm TV twinlead as a low cost, readily available, low loss transmission line were discussed in our last article. TV twinlead, like open wire transmission lines, (ladder line), is a balanced line and must be fed with either a balanced line tuner or a balun.

Both of these are discussed at great length in the Amateur Radio Handbook published by the ARRL and in other publications dealing with transmission lines and antennas. We'll attempt to enhance theory with practical construction from "junkbox" materials.

The balun is the easier of the two devices to construct and, therefore, we will start with a balun. If you have a tuner that feeds coax, you will only need to connect the balun to your present tuner to use balanced line.

The balun described in this article can easily be made in one evening and uses a ferrite toroid which can be readily obtained from either Amidon Associates or Palomar Engineers, both of whom advertise in QST. Both companies will accept small orders and will provide literature on request. The Amidon toroid which is used in this article is Amidon part number FT 240-61 which sells for about \$6.00 plus \$1.50 handling charge. Specifications are:

O.D. 2.4" I.D. 1.4" Height .760" $\mu = 125$

The FT 114-61 core can also be used and is about one-half this size, but is limited to 250 watts.

Both of the above cores are ferrite, which has a broader frequency response throughout the HF band, than does iron powder.

The balun may be wound with a one-to-one ratio, a four-to-one ratio, or a nine-to-one ratio. The one-to-one balun will be described here because it exhibits lower losses than do the others. When use in conjunction with an antenna tuner, the tuner provides an impedance match.

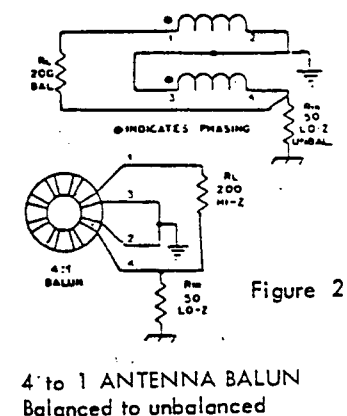
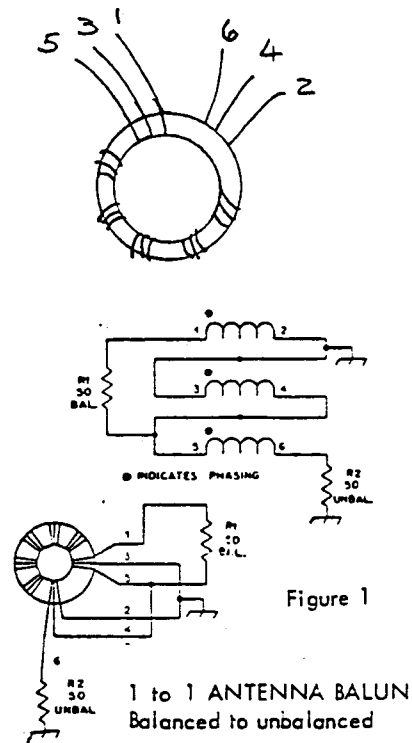
Construction is straight forward and does not require any special tools other than wire cutters, sandpaper, and a soldering iron.

Start by sanding the sharp edges of the toroid and wrap the core with electrical tape to prevent damage to the insulation on the wire. Cut three pieces of #12 or #14 wire to equal lengths of about three feet each. Place the three wires parallel to each other and twist them together. This can be done easily by clamping one end of the wires in a vise and twisting them together with a hand drill or hand pliers. When the wires are twisted together, wrap them tightly onto

the core. At least seven turns are required, but the more the better. This is known as a trifilar winding. Space the turns evenly around the core using the entire core. Connect the wire as shown in the diagram, keeping all leads as short as possible.

When the windings are completed and the connections made, the balun should be mounted either in a weather proof box for outdoor use, or a simple box for indoor use. The container may be plastic, metal, or any other material. Toroids do not need shielding. The mounting will be left to the imagination of the builder. Suggestions for mounting can be found in the ARRL Radio Amateur's Handbook in the chapter on transmission lines.

This is a very easy project and will save you money. If you don't believe me, price baluns and coaxial cable.



Long Ago, But not Forgotten

By

Jeff Duquette K1BE

While most of the members are new to ham radio, we have some who go back to the early days of radio. As you all know, the HCRA was formed out of three radio clubs in the Greater Springfield area. They were the Connecticut Valley Radio Club (CVRC), the Springfield Radio Association, (SRA), and the Western Mass Radio Club (WMRC). The SRA is probably our "Mother Club" more than the others. World War II put the kibosh on radio activities, and in 1946, the clubs merged to form your present day club. An article by Tom Barrett, W1KUE, will be re-printed in a future issue that will explain this in more detail. Here's some of the past historical highlights of the club. An asterisk means watch for a future article with more information on this topic. The first part of the list was originally sent in by Howard Cutting W1JWV, and published during the 1950's in Zero Beat.

1919- Springfield Radio Association is formed by the late "Ike" Creaser, then W1BSJ, and met in the State Street Baptist Church.

1920- Affiliated with the ARRL.

1921- *Relayed the Carpentier-Dempsey fight to an estimated audience of 10,000 people. Had booths in the radio shows of those days and handled traffic universally.

1928- Sponsored the ARRL convention at the Hotel Kimball, Springfield.

1930- Maintained communication stations on pylons at air races at Bowles Airport, and at other fields.

1931- *Was official communication station at the First Corps Area Air maneuvers at Bowles Airport, received commendation, from Major General George S. Gibbs, Chief Signal Officer, U.S. Army.

1932- Experimented with the first 5 meter radiophone communications.

1946-47 *Club constitution is drafted and approved, with merger of the three existing radio clubs in the area. First running of the January VHF Sweepstakes!

1948- State of the art BC645s being used on VHF & UHF. *W1MNG (now W1KK) joins the club! Stamps to mail Zero Beat, as yet unnamed, cost 1 1/2¢. First club banquet is held, the start of an annual tradition.

1949- HCRC now affiliated officially with the ARRL under its new name. VHF Sweepstakes articles about rigs and

antennas well represented. Members are building their own television sets.

1950- Club meetings moved from the Hampden County Improvement Building to the Chalet. Participation in DX contests, and VHF experimentation big club activities. W1QWJ writing excellent technical articles. 10 meter club net going strong. Civil Defense a major concern of members. W. Ma. going horizontally polarized for 2 meters. Members try for class "A" or "B" licenses at Tech High.

1951- W1HDQ, Ed Tilton, featured guest speaker. (Is still a club member, now lives in Florida!) Doc Webb accepted for membership #100. Other members reporting for military duty. Bill Werenski, W1CJK is club president. (And still a member today!) Members are trying to build color televisions.

1952- Ike Creaser becomes a Silent Key on December 21. HCRC sponsors ARRL convention at the Eastern States Exposition grounds.

1953- The fire tower burns down during Field Day in Wilbraham and the dues are raised to \$3.00 to pay for it. Worried directors look at incorporating the club to avoid liability.

1954- HCRC becomes the HCR Association, incorporated under Massachusetts laws.

1955- Meetings are at the Captain Leonard House. Club QSL card is available to all members. In VHF SS, Hampden County RC was 4th in the country with 45,000 points, Hartford RC was 5th with 40,000. Harold Atwater, W1VNH, gets WAS #28 on 6 meters, the first in the Northeast. Note there were only 48 states! Bob Gordon, W1KUL is teaching a novice course. Tom Barrett, W1KUE is president. Ted Witowski, W1RLV is Ludlow Radio Officer, assisted by Mike Ludkiewicz, W1DGJ. Tom Chapman, W1KK, becomes a silent key. Hurricane Diane has members like Art Zavarella, W1MNG, Agawam Civil Defense Director, working overtime. Don Johnson, W1UPH is at radio school at Keesler Air Force Base, and is now A3c. Members help with communications for the Powder Puff Derby, the transcontinental women's air race. George Hughes is active in 4-H, and wants an amateur radio set up at the Eastern States Exposition. Art, W1MNG, resigns as SCM, when he discovers his license has expired!

1956- Members make the club a leader in VHF work. High power amplifiers designed by people like Dick Stephens, W1QWJ set the standard for everyone else to copy. Hartford RC beats the club in the January contest, though! Too many members rested on past laurels! Much gnashing of teeth in

newsletter. Bill Rosner, WIRFU is president. No one sent in a log for DX Contest. Don Johnson, WIUPH, writes a nice letter from Greenland, TF2. Mike Ludkiewica, W1DGJ has a new Heath DX-100. Ed Tilton, W1HDQ crossing the U.S. operating 2 and 6 meters. Dick Downing, W1TXS put up a new tower and beam. Valley ARC started up. Conelrad monitors required in the shack. Jim Spates, W1ARA accepted into membership. Norm Forrest, W1STR has a nice 6 meter beam, but no transmitter!

1957- Members listening to Sputnik and providing tape recordings to local news media. Mac McKeraghan W1HRV is president. Ken Walker, W1FAB is operating a Viking Valiant. Bill Werenski's KW makes W1CJK heard up and down the valley. Roger Corey W1JYH is club coordinator for ARRL DX contest. Club beat Hartford in the VHF SS. ARRL dues are \$4.00 per year! The West Coast finally worked Hawaii on 144 Mc. 6N2 rigs are the "biggie" to own. Bylaws changed to make club year June to June vs. January to December. Stan Call, W1CYG joins the gang. Zero beat features VHF SS articles on antennas (wooden frames!), and Gonset Communicator modifications.

1958- Dues are \$3.00 per year and 117 members are in the group. Club wins the VHF SS in January and keeps the gavel the Hartford club bet. This was over five years, and what a battle! Special club ID badges are given away. Hank Baier, W1NY is president. Al Miles, W1GQP, is cited for calling in an auto accident to the Agawam Police. Al Jackson, W1OBQ, and other members are copying signals from the new American Satellite.

1959- 11 meter band taken away and now belongs to CB.

1960- APX-6's hottest rig for 1200 Mc, cost an outrageously high \$15.00 but worth it to VHF enthusiasts. Bill Ham, W1RRX is president. Tom Shea, W1HYO, is Zero Beat editor, a job he does for many long years!

1961- Chet Balicki, W1IVK shows off the Collins A-4 receiver. Norm Forest, W1STR, (now N1PF) is president.

1962- W1STR tape records the OSCAR I satellite on 145 MC. Bob Little, W1WLE is Zero Beat editor, Bob and Eunie Gordon with Tom Barrett's help, have been publishing it for years. Jim King, W1EVZ, pushing RTTY activity on 2 meters. Cal Phillips, W1MDM, is president. (Now he's down boating in the Caribbean!) OSCAR II is launched. Mike Ludkiewicz, W1DGJ, earns first class commercial radio license. Jean and Norm Peacor, K1IJV & K1IJU, have a new tower and beam up. Doc Tadgell, W1AGM, is at new QTH in N.H.

1963- *Award for working 25 HCRA members is first issued

on February 1, 1963 to Bernie Goyer, W1UPF. Middlefield Fairgrounds are used for the first time for Field Day. Fred LaValley, K1FUA, accepted as a member. Howard Gurney, W1IC is president. Bill Hall, K1RPB, (now W1JP) takes over as Zero Beat Editor. Bill has an article published in "73" magazine.

1964- Incentive licensing begins. Club meeting place is now the Feeding Hills Congregational Church. W1NY, Hank Baier, honored at a club dinner for his fifty years of service to amateur radio.

1965- Norm Peacor, K1IJU, club president. Bob Young, K1NWF, won the HCRA WAS contest. Gent Lam, W1CQF, won the N.E. Division Novice Round-up. Bob and Eunie Gordon journey off for a stay in St. Louis.

1966- Gus Rosati won a TO Keyer the club raffled off. Dues are still \$3.00. K1YPE/XV5 operating from Vietnam.

1967- Club becomes the W1 area incoming QSL bureau. George Dougan, K1PMK, is president. Phil McDonald, W1ICTQ, Ted Lockwood, W1GZO, accepted as a members. HCRA beats out Hartford club in the VHF SS and keeps the bell trophy! Novice phone privileges are dropped by FCC.

1968- George Hughes, W1ALL is president. Jean Peacor, K1IJV, running a cw training net. Gil Williams, W1APA, a silent key. Gil was first elected president of the club. W1IJUJ, Kevin Stromgren, just one of many new novices from classes taught by George Hughes and Al Hall, W1IUB.

1969- Bill Stacey, K1ANF is president. Vic Paounoff, W1EOB, off to Japan. Bill Stacey, K1ANF doing EME on 144. *Art Zavarella W1MNG gets callsign W1KK. Paul Wing, K1WVX moves to new QTH in Suffield, CT. HCRA won the club competition against Talcott Mountain group by one point!

1970- Bob Phoenix, W1DNB is the SEC and asking for even more participation in AREC.

1971- Ed Goldberg, W1PLS joins up. W1KUE, Tom Barrett honored for his many years of service to the club. Gary Potts, W1ECR is VHF contest chairman. Vince Falardeau, W1GJV has an antenna raising party. Two meter repeaters are on the air in Western Mass. Ed Tilton, W1HDQ, (HCRA Life member!) guest speaker on VHF receivers. Tube gear still the order of the day, but solid state starting to take over. Bob Phoenix, W1DNB, is SEC, a job he holds for 15+ years. SSB becoming preferred HF voice mode. What to do with all those AM only receivers? Jack Sheehan, K1NJC operated the VHF SS with club call

WA1BTU from atop Mt. Tom. Bill Hall's home brew transceiver in February QST earns K1RPB Director's award. Bob Stephens, W1MM retired from GE. Ed Stefanick, WA1CYK building an antenna tuner.

1972- 25th anniversary of the club is celebrated. Club dues are \$5.00 OSCAR VI is up! Ed Tilton, W1HDQ, retires from the ARRL. FM operation on VHF is coming thing. League dues are \$7.50! Don Gleason, W1RED, re-joins the gang. Bob Gravel, K1BUB completes his HW-101. 6 meter gas company rigs going cheap to members. Paul Caputo, K1PKZ is club president.

1973- Vince Falardeau, WA1GTV is president. W1MM, Bob Stephens giving talks to local groups about amateur radio. Bob McCormick, WA1QHR joins up. Eleanor Gray takes over from the Gordons as W1 QSL Bureau manager. Flea market done for the first time.

1974- Oli Quist, K1HYL is president. (I chatted with him at our flea market on April 28. K1BE) Members are up in arms over dual licensing structure proposal. Frank Potts, WN1RWU has a high score in novice Roundup.

1975- CB boom is in full bloom. Al Jackson W1OBQ passed into the ranks of silent keys. Don Gleason, W1RED talking back to Western Mass friends from Barbados. Jeff Duquette, WA1SNJ joins the club. John Sullivan, W1HHR becomes N.E. Division Director. Gary (WA1ECR) and Frank Potts WA1RWU built the new Heathkit SB 303.

1976- *Club call W1NY issued by the FCC. This was the call sign of Hank Baier, one of the founding members. Jeff, WA1SNJ, operates KP8USC to celebrate the bicentennial from atop Perry's Peace Memorial in Lake Erie. QST picture shows him way up in the air bolting on an antenna! Club president is Ted Lockwood, WA1GZO. Extras with 25+ years can choose a 1x2 callsign. Harold Atwater, W1VNH, is a silent key.

1977- Jeff Duquette, WA1SNJ, is president. (now K1BE). Novice course at Agawam H.S. ends and the next one begins at the Westfield Y. Many present club members graduated from that program. OSCAR communications of big interest to members. Spaghetti supper at the Westfield Y honors Percy Noble, W1BVR for his many years of outstanding service to amateur radio.

1978- *KM1CC commemorates Marconi's first transatlantic transmission and HCRA members are there to help operate.

1979- Kevin Stromgren, WA1JUI is assigned overseas. WA1RWU, Frank Potts puts his EME array on the air. Club does a huge show at the Springfield Science Museum, which

is the hit of the program. Fred Stefanick, KA1APR is our first "KA" call.

1980- K1BUB operates winter Olympics special event station, WORAN. Bob sent this idea into the ARRL back in '78. Ron Beauchemin, WB1ETS is president.

1981- Eunie and Bob Gordon moving to Florida. Yorke Phillips, K1BXE has his home-brew satellite TV receiver working.

1982- Computers are all the rage. Satellite TV explained in articles. Steve Nelson, WA1EYF coordinating the licensing classes. Tryon Cote, WA1YCA recovering from a knee operation. Cliff Junkins, W1UWX again wears his gaudy (read "ugly") bowtie from World War II to the meeting. Top club score in the country in the January VHF Sweepstakes.

1983- BASH books helping many to upgrade. Bert, WB1DTZ helps the ship "City of Dunedin" when he hears their mayday after running aground. Jean and Norm Peacor operate many club members from St. Kitts & Nevis Island, using the calls VP2KBD and VP2KBE. HCRA is again #1 in VHF contest! OSCAR 10 signals are loud and clear. President is Steve Nelson, WA1EYF. Bob McCormick KA1KPH is recovering from an auto accident. Packet radio experiments going on.

1984- WA1RWU (now NC11) continues making EME history; first to work Russia and Brazil. Club sponsored the first Volunteer Examiner session in the area. First packet repeater, KA1KPH-1, put on the air in Springfield. (now W1NY-1)

1985- HCRA becomes a Special Service Club. KA1KPH/R is state of the art repeater with computer generated speech. Teleconferencing radio nets and Westlink Reports are carried live via this repeater. *NASA space shuttle communications are re-transmitted through the Greater Springfield area, on W1NY thanks to Joe Wolos, WA1OCK. Jack Plantinitis, KA1KRJ contacts W0ORE aboard the space shuttle Challenger. *Special event station, N1BHF, operated for grand opening of Naismith Basketball Hall of Fame.

1986- Space shuttle Challenger explodes on takeoff.

1987- Amateur TV generating more interest. 40th VHF SS has the club going for the gold. Pilot test for the ARRL of novice code training tapes helps them to pick the best one. OSCAR 10 failing. Field Day is the biggest effort in the club's history.

1988- W200NY operation a huge success. Rusty Hack, NM1K, operates W200AW. Volunteer radio exams are held

every month.

1989- Percy Noble, W1BVR, the grand Old Man of Western Mass, is a silent key. Hurricane Hugo traffic swamps the nets. KA1KPH/R hit by lightning.

1990- W1NY number seven in the country for Field Day scores!

1991- VHF Sweepstakes has record participation. New codeless license started on February 14th, WF1R starts a radio class at Agawam High.

Note from K1BE:

I hope you've enjoyed reading this anthology and that it brought back memories. I do not have a complete collection of Zero Beats, so some years are missing or thin. You should be proud that you belong to such an active group!

Several things are constant in reading through so many Zero Beat issues - Every year there was an auction, a banquet, Field Day, VHF and DX contesting, technical articles, licensing classes, club sponsored contests, and other activities. The continuing success of the club is due to how well it was organized and set up in the beginning, and the many activities the membership can participate in. Let's dedicate ourselves to continuing these fine traditions, and do even more in the future!

Annual Membership Dues

Dues for the Hampden County Radio Association are \$10/year. As a member of the HCRA you will receive 10 issues of Zero Beat, possible special notices of meetings, the ability to vote for officers and directors at the annual meeting, and the ability to submit your score towards the club score in radio competitions like the January VHF contest.

The club meets the first Friday of every month, except July and August, at the Feeding Hills Congregational Church, Feeding Hills, Mass. This is West of Springfield. Take route 57 West and at the intersection of routes 57 and 187, turn right. The church is immediately on your left!

You may sign up at any meeting by seeing the club treasurer,
Greg Stoddard N1AEH,
1500 Mapleton Ave
Suffield, CT 06078

or you may send your payment along with name, address, call, and license class to HCRA, P.O. Box 482, West Springfield MA, 01090-0482.

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SHF SYSTEMS No tune linear transverters and transverter kits for 902, 1269, 1296, 2304, 2400, 3456 MHz. All use 2m i.f.g13.8V. Kits include mixer and L.O. P.C. boards, xtal and all components. Built units include I.F./D.C. switchboard, connectors and compact low profile housing. Other frequency options in amateur band available.

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SHF 2304K	2304-2308 MHz	10mW	Kit \$205	Built \$325
SHF 2401K	2400 MHz Mode S rcv Conv		Kit \$155	Built \$255
SHF 3456K	3456-3460 MHz	10mW	Kit \$205	Built \$325
SHF LOK	540-580 MHz L.O.	50mW	Kit \$ 66	

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2304 PA	10mW in 5W out	1240-1300 MHz	\$140
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2335 PA	10W in 35W out	1240-1300 MHz	\$325
2340 PA	1W in 35W out	1240-1300 MHz	\$355
2370 PA	5W in 70W out	1240-1300 MHz	\$695
3318 PA	1W in 20W out	902-928 MHz	\$275
3335 PA	14W in 40W out	902-928 MHz	\$335
1302 PA	10mW in 3.0W out	2304 MHz	\$400
901 IPA	10mW in 1W out	3456 MHz	Write or Call

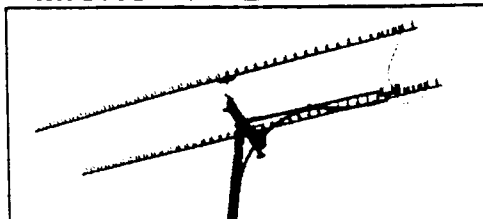
T/R Switching available, all 13.8 VDC

Low Noise Preamps & preamp kits—432, 902, 1296, 1691, 2304, 2401, 3456 MHz, 5.7 and 10 GHz.

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13LNA	preamp .7 dB NF	2300-2400 MHz	13.8V	\$130
1691LNAWP	preamp 1 dB NF	1691 MHz mast mounted	13.8V	\$140
4017LNAK	preamp kit	400-1700 MHz	6 dB	\$ 40

Preamp kits for 2304-10 GHz Write or Call

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1345LYK	45el	loop Yagi Kit	2304 MHz	21 dBi	\$ 79.00
945LYK	45el	loop Yagi Kit	3456 MHz	21 dBi	\$ 79.00

Other models available. Call or write for catalog.

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RFI in the Early Days

By

LOUIS R. HUBER, W7UU

Interference problems have beset Amateur Radio from the very beginning, but they were much different in the early days. The only practical way to solve them was to stay off the air, and that solution usually was followed when amateurs interfered with government services. Radio inspectors (RIs), who in those early days worked for the US Department of Commerce, had authority to impose silent periods for hams who interfered, for example, with Navy ship communications. Problems of this sort occurred rather often on the Eastern seaboard. Inland, except for the Great Lakes area, such problems did not exist; hams interfered with each other, of course, but that was their problem and they were expected to solve it among themselves. The solution usually was for the ham with the loudest signal to go ahead; those with weak signals stood by.

The above scenario existed from the beginning of ham radio (about 1910) until the early 1920s. Some explanation is due here. During that period there was only one kind of signal in ham radio: spark. Have you ever heard a spark signal? Probably not, so let me try describe it.

All spark signals were broad-far broader than any signals heard today. Indeed, if a 1920s-type ham spark signal were to come on the air today you would think it must be someone keying a power leak. But it didn't sound that way in the early 1920s. Hams then had non-oscillating receivers -usually a loose coupler (one smaller Quaker Oats container sliding into and out of a larger Quaker Oats container. unless you could afford to buy a factory-made loose coupler from Montgomery, Ward & Co.) with a crystal detector.

Later came vacuum tubes and Maj. Edwin Armstrong's famous regenerative circuit, which also was non-oscillating up to a point. The trick was to make the receiver almost oscillate, in which state it amplified the incoming signal. It was done with a variometer, or coil in two parts, one rotating inside the other. Connected in the vacuum-tube plate lead, the variometer smoothly led the receiver into and out of oscillation as the inner half was rotated.

There was one small redeeming feature in sparks: they sounded good! Especially those with rotary gaps: indeed, I think the melodious sound was the main reason for having a rotary gap. You could vary the gap's rotating speed with a rheostat, and when it was just above or just below synchronism with the 60-cycle AC power supply a pleasing tremolo resulted, somewhat mindful of a pipe organ. I remember seeing in a magazine a poem entitled "My Rotary" which was patterned after the hymn "My Rosary" and could be sung to that tune.

Another element contributing to ham interference problems was a lack of knowledge of just what was going on. No ham that I knew had a frequency meter (which would have been called a "wavemeter" then, because nobody spoke of frequencies until about the 1930s). You put up your antenna (called an "aerial" then) in whatever space was available without any concern for length or resonance. Hams were supposed to stay at or below 200M anyhow. And, since there was nothing between 200 and 600M (the latter being the nearest important assigned wavelength in those days) no ham was much concerned about the danger of getting above 200M.

In the 1920s the coming of the 3-element vacuum tube enabled hams to use continuous wave (CW) transmission. The big advantage of CW was that it concentrated the radiated energy on just one wavelength instead of spreading it broadly as spark did. There were some hardshell lovers of spark who refused to acknowledge this; but, in the main, hams took to CW in a big way, and sparks began to disappear, along with spark-caused QRM. (Phone had not yet come to ham radio; it brought more interference problems, but none to compare with those of spark.

But before it did, another problem appeared: BCLs (broadcast listeners). As spark was phasing out, broadcast radio was coming in. I was a part of that problem with the half-kilowatt rotary-gap spark transmitter I had bought (used, for S25). With that kind of a rock crusher, broadcast listening was impossible in the small Iowa town where I lived. I was quite unpopular with the small but growing broadcast listening public.

I was especially unpopular with the proprietor of the local electrical store. He had added radios to his wares and, when his customers tried to tune in Amos-n-Andy and got nothing but me, they complained to the dealer. He was at his wits' end, until he had a bright idea one evening.

Our telephone rang, and the call was for me. A gruff voice said: "This is the mayor. If you don't shut down that infernal noise maker that is bothering so many people, I'll have your electricity shut off."

The electric utility in our town was municipally owned and, of course, the mayor was the head of it. He probably could, indeed, have had my electricity shut off.

But I hesitated. Was that the mayor? I knew the mayor slightly- his daughter was in my grade in high school-and my telephone caller didn't sound quite right. Another thing: I had obtained my ham license only a few weeks before that, and of course I was full of knowledge about radio regulations,

including the fact that mayors had no control over any kind of radio operation.

So I telephoned the real mayor. "Mr. Dallas," I said, "this is Louis Huber, did you call me?" I thanked him, hung up the phone, went upstairs to my ham shack, turned on my half-kilowatt sod buster and called CQ, thus notifying the impostor that his ruse had failed. (Fortunately the mayor had not yet bought a broadcast radio.)

How far this skirmish between me and the electrical-store proprietor might have gone I don't know. Shortly thereafter I managed to build a CW transmitter, and I retired the half-kilowatt spark. No more busting up Amos-n-Andy when I went on the air. CW worked better, too: now I could reach the East Coast rather than just the next state. But better yet, the electrical store proprietor had no more cause for complaint. I was walking past his store a few days later; he saw me through the window and waved. I waved back. Peace and harmony again prevailed. Thanks, CW.

Jamboree On The Air!

By

Charlie Dunlop, K1II

On Saturday, October 19, four HCRA members met with ten scouts from Southwick Mass. Charlie Dunlop, K1II, Jeff Duquette, K1BE, Nick Duquette, N1JJD, and Fred Gore, KA1TBS. Fred was gracious enough to allow the use of his home station, which had enough room for all!

The scouts were led by assistant scoutmaster Erik Bowen. They were introduced to amateur radio and heard how a repeater works, by using AC1T/R, with stations AC1T, WA1PGT, WA1OCK, N1EPE, KC1TH, and KD1AF checking in. They operated 10, 15, and 20 meters under the supervision of control operators K1BE and K1II. QSOs were made to Orlando, Florida with KD4CZJ in Disneyworld, and KD4BJF/MM aboard a 130 foot, 9000 horsepower ocean going tugboat pulling a 730 foot barge enroute from Miami to Puerto Rico.

The scouts were able to communicate with many other boy scout troops throughout the U.S. They did the operating while the control operators coached them. Three of the boys were awestruck listening to 28 Mhz cw; the speed and not knowing what was being sent inspired them to learn the Morse code and get a merit badge. (Maybe even an amateur license!)

A great time was had by all, including the scout's parents. Special thanks to Fred Gore and his wife Sue for hosting the scouts on short notice.

HCRA EXAM SESSION

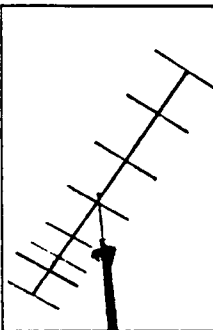
The recent exam session sponsored by the HCRA held on November 2nd, resulted in the following upgrades and one new amateur:

Gregory Abare		Passed Tech, no code
John Kellison	KA8SPH	passed Extra
James Kearney	KD1ES	passed Extra
Barry Mason	N1JK	passed Advanced
Tyrone Beabault	NIKFH	passed Tech+

Congratulations to all!!!!

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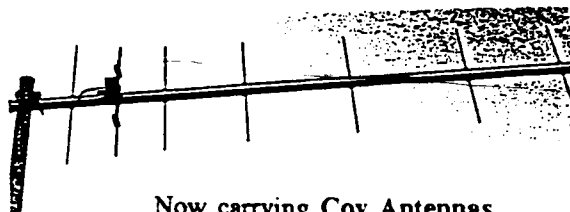
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CQ DX

By

Bob McCormick WF1R/PA

Most of you remember me by my old callsign, KA1KPH. I'm now tackling a new horizon: East into Europe!

At the end of June I left my old position to take an offer of project manager of automation in Holland. I'm a subcontractor to Digital Equipment, working with the Dutch organization that sells and schedules advertising on the government controlled radio and TV networks. On average, I spend three weeks in the Netherlands, three days traveling back and forth, and a few days back here to catch up on bills, etc.

As you know, I've made a hobby of collecting licenses and operating from places I've been, and Holland is no different. This is simple to do and I suggest you try it even if your vacation is only for one week.

The US government has negotiated reciprocal amateur licensing with most Western nations, and even a few obscure ones. Your best source of information is the ARRL, who'll send you forms for the countries you desire to visit.

Most countries have simple procedures to obtain the necessary operating permission. Note that most countries collect a fee (tax!) for the privilege. For example, in Holland, it's Dfl100.00, which is about \$52.00 per year.

Allow enough time to process the paperwork! A check made out in the correct currency with the right amount is the difficult part. Austria is the exception. Send no money but when you arrive go to any post office and pay the fee, and they affix a stamp to the license that validates it.

Knowing the language and especially radio terms is a big help with the application. My Dutch license application came in many languages, including English. I deposited Dfl100 at the local post office into the PTT account, (Equivalent of our FCC), and mailed the application and receipt in. Oddly enough, the license arrived seven days later in my Feeding Hills post office box, and this included mail time from the Holland to the US!

The Dutch PTT sends along a nice letter, a book of rules and regulations, and a renewal form, all in English. You also receive stickers which must be affixed to all of your equipment.

I recommend that you always carry the originals of your license with you, including your US license. Mine is stapled to my passport! Most of the countries I've visited will not accept a photocopy.

Once you have your license, make sure you know the rules and regulations of that country. Most common band is 2 meters, but the band plan is very different outside of Canada and the US. Again, the ARRL can help you here.

On the technical side, most repeaters in other countries are not carrier operated, but are keyed with an access tone. Most often an audible burst at the start of your transmission. It is not the same as what you might use here in the US! You should contact your rig's manufacturer for tone units for use in other countries.

In Holland I find heavy use of two meters, including simplex, repeaters and packet. Unfortunately I haven't operated much as the two meter crowd doesn't seem to want to speak English to some foreigner. If you use 220 or 430-440, you may as well leave the rigs home. Things are different overseas and it is often too much trouble to convert the units for use.

With a general class or higher license, you can operate DX phone bands. Remember, other countries only have two or three license classes. When your a DX station you'll love being on the other end. It's amazing how loud the Europeans are when you operate from Europe!

Pack your small HF transceiver well in a suitcase. Extra padding is required. You may think using the original shipping case is the best way to take it, but customs is sure to spot it, or thieves. Make sure you have compatible plugs for the different power sources.

You must operate according to the R&R's of the country. Remember you'll stand out for many reasons, not just your callsign!

I'll soon have a PA3... call, because I've passed the radio exams. This is similar to other citizens passing US radio exams, and getting a US call. That's it, drop me a line if you're interested in operating from a different country and have questions.

NEXT VEC EXAM SESSION:

January 4th, 1992 @ 9AM

Minnechaug Regional High School
Wilbraham MA

Sponsored by the Hampden County Radio Association
Contact Yorke Phillips K1BXE for more info.

Club Field Day Score

If you missed it in QST, HCRA scored 12,586 points, with 4,157 QSO's. We are listed as #1 in 7A group!

1991 CLUB OFFICERS 1992

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Vice-president: N1EPE Larry Lemoine
Treasurer: N1AEH Greg Stoddard
Secretary: N1DUY Jim Sebolt

Directors:
K1CPJ
KAIQAS
K1II
NC1I

Bob Cohen
Scott Cohen
Charlie Dunlap
Frank Potts

WAIYCA Tryon Cote
WA1PLS Ed Goldberg
KA1TBS Fred Gore
N1DPM Fred Stefanik

Have a Merry Christmas
and
a Happy New Year!

Next Meeting
Friday December 6th
Feeding Hills Congregational Church

7:30 pm doors open
Meeting starts at 8 pm

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