

ZERO BEAT

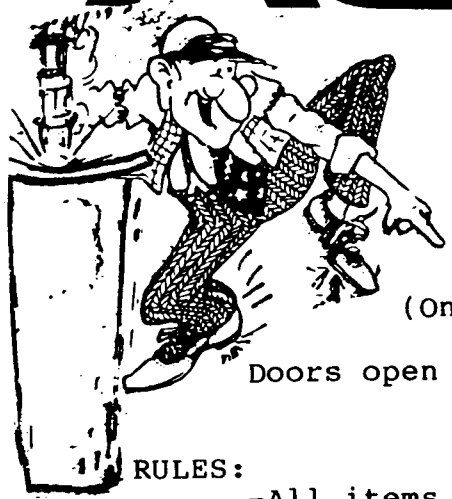
HAMPDEN COUNTY RADIO ASSOCIATION

SPRINGFIELD, MASS

NOVEMBER, 1984

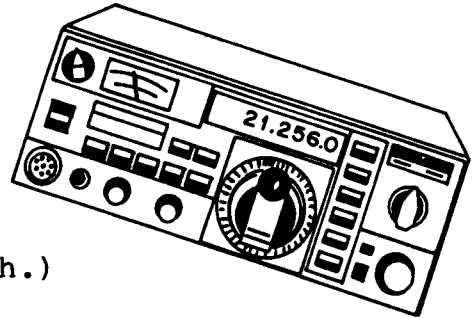
ARRL AFFILIATED, 36th YEAR

AUCTION!



FRIDAY NOVEMBER 2ND, 1983

GRANGER SCHOOL
FEEDING HILLS, MASS
(On a Diagonal from the F.H. Cong Ch.)



Doors open at 6:30pm, Auction starts promptly at 7:30!

RULES:

- All items must be clearly labeled with your name or call.
- Club takes 10% of all sales.

-Minimum bids may be marked on items. Seller may bid to protect his own item. No charge if seller buys his own item. (HOWEVER, we will only try to sell each item ONCE! No one will be allowed to buy and then put the item back in for re-sale.)

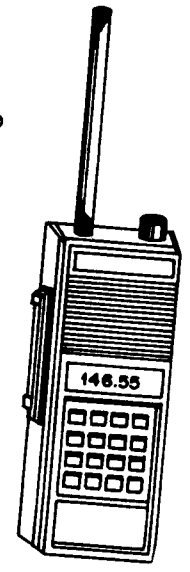
-Items donated to the club should be clearly labeled "DONATION". Tax receipts will be available.

-Seller guarantees the item, not the club.

AUCTIONEER HAS THE FINAL SAY ON ALL SALES. DISPUTED ITEMS WILL BE PUT UP FOR BID ALL OVER AGAIN.

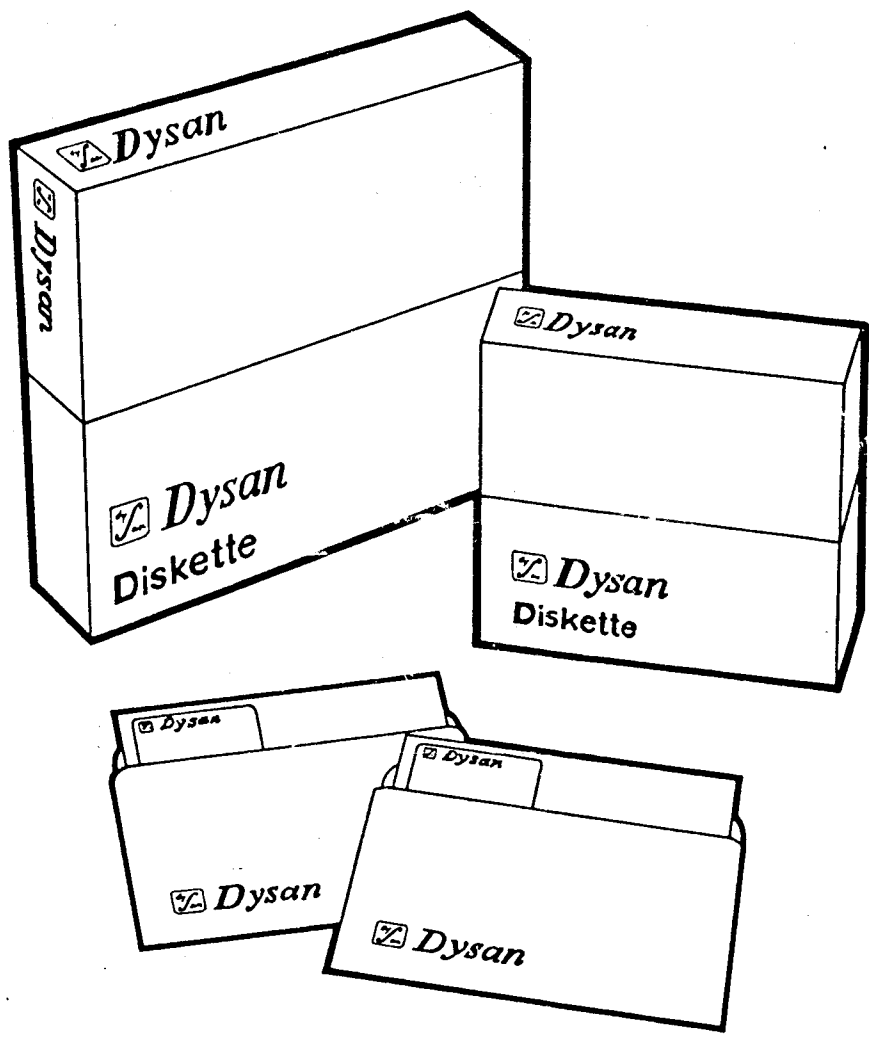
It's OK to put interesting information on an item to help the auctioneer get a better price. For example, if the rotor you're selling is new, write it on the item.

PLEASE- This auction is to help pay the high costs of printing your club newsletter. WE NEED YOUR SUPPORT!



%%%%%%
DUES ARE \$9.00 PER SEASON. (Sept-June) MAIL TO: Greg Stoddard, N1AEH,
1500 Mapleton Ave, Suffield, CT 06078

Dysan. The Finest Quality Diskettes Available.



Dysan's 5 1/4" or 8" diskettes are available single- or double-sided, and in single- or double-density formats.

Dysan's advanced production techniques assure that each Dysan diskette is certified 100% error free. So you can count on Dysan for your IBM*, Apple*, Tandy*, Atari*, Commodore*, Osborne* or other personal computers.

So give us a call. Or stop by. We have a complete inventory of the finest quality diskettes on hand. Dysan diskettes.

Why pay more when you can have the best for less!

BUSINESS COMPUTER SYSTEMS OF
NEW ENGLAND
P.O. Box 2285
Springfield, Mass 01101

Our friend JERRY GRIFFIN, WA1PGT is your local dealer! Call for special prices.
413-567-0367 (Evenings)



NOW WE FIGHT!

The battle lines are now drawn.

Two petitions for rulemaking to re-allocate part or all of the 220 MHz band have been filed with the Federal Communications Commission. On Monday, July 31, they were assigned RM numbers.

The first, dubbed RM-4829, was filed on June 21 by the Land Mobile Communications Council, a lobbying group which represents some 22 users groups in the Land Mobile industry. The second, RM-4831, was filed July 16 by Sideband Technology, Inc., of Scottsville, New York, a manufacturer of Amplitude Companded Sideband (ACSB) equipment for industry.

COMMENTS ON BOTH OF THESE PETITIONS ARE DUE ON OR BEFORE AUGUST 29, 1984, WITH REPLY COMMENTS DUE BY SEPTEMBER 13. 220 NOTES intends to petition the Commission for an extension of time for comments, to allow the Amateur Radio community to present evidence of band usage.

The main thrust of the LMCC petition is not actually toward 220 MHz, but rather aimed at getting the FCC to release the reserved spectrum in the 800 MHz range for future land mobile use. 220 MHz is mentioned more or less peripherally in the report, as a possible future option, but that option calls for the taking of ALL of 220 MHz.

The Sideband Technology petition, on the other hand, though calling for only 2 MHz of the band, from 220 to 222 MHz, want it NOW, period. And, in addition to that, wants 216 to 220 as well, where the FCC has recently established the Inland Waterways Communications Service (IWCS).

Both petitions were prompted by the release of Docket 82-10, which was a final report on the needs of Land Mobile Service in the next 16 years (to the year 2000). In that report, 220 was mentioned as a distinct possibility for the use of the Land Mobile Service.

Time is no longer on the side of Amateur Radio on this issue. The time to act, both towards ourselves and toward the FCC, is NOW. In other articles in this issue we will present arguments for you to use, the methods by which they are best to be presented, and the things you can do to best keep 220 an Amateur Band. In addition, we will give the views of the "other side" on this issue, the salient parts of the petitions of both LMCC and STI, and the feelings of the FCC staff in this matter.

Read on, then ACT!

--K9XI

WHAT CAN WE DO TO KEEP 220 AN AMATEUR BAND?

We have a job to do in order save 220, all of it. Here are some things we can do to help.

First, above all, we NEED to populate this band more. I said that in the February 1984 issue of the NOTES, I said that at Dayton, I said it in the "primer for 220 Growth" which appeared in these pages in 1981, and in QST in November of that year. The interested reader is referred to that article for specifics on the subject. We have some copies here at the NOTES, and you may have one for an SASE. My address is on the last page.

There should not be an idle Midland 13-509 in this country. If there is, it should be sold to someone who wants to get his feet wet on 220, and do it on the cheap. With the ICOM rig out, and the KDK and Azden versions about to be, now may be a good time to sell your old rig and buy one of those. After all, you do want all the bells and whistles to which you've become accustomed on your 2 meter rig, don't you?

continued next page

SOURCE OF THE RECENT 220 ANXIETY....

The current concern for the future of the 220-225 MHz ham band was touched off by four events that happened very recently. First, the Land Mobile Communications Council, a non-profit association of land mobile users and providers of services filed a petition on June 18th seeking more spectrum. The LMCC did not specifically ask for the 220-MHz ham band - only that the FCC consider it.

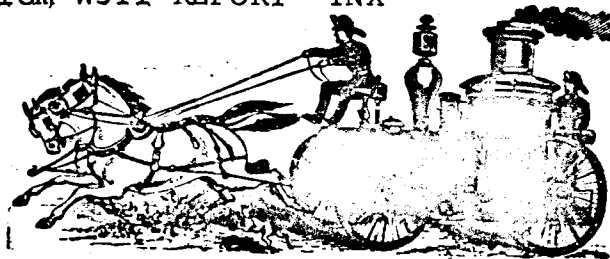
Second, on July 16th, Sideband Technology, Inc of Scottsville, New York. (STI) submitted a "Petition for Spectrum Reallocation" asking for 6-MHz of spectrum "for exclusive use by narrowband transmission systems" (ACSB - amplitude companded sideband) in the Land Mobile Radio Services. The requested 6-MHz was from 216-222 MHz and included a 2 megahertz slice of the 1-1/4 meter ham band.

Third, on July 20th, STI filed an addendum to their original petition. It included professionally prepared charts of government frequency assignments and ham repeater use between 216 and 225 MHz. These charts clearly show significant activity between 216 and 220... and 222 and 225 MHz. Virtually none between 220 and 222 MHz.

Fourth, on July 21st, Bob Foosner, Chief of the FCC's Private Radio Bureau in a speech given at the ARRL National Convention publicly acknowledged (although not for the first time) that they were indeed exploring an option that could reallocate amateur 220-MHz band spectrum to "accommodate the ever increasing Land Mobile needs of the country."

Thus, in a month's time the VHF amateur community has gone from spectrum complacency to excited and agitated concern. Let's look into the two petitions filed by the LMCC (assigned RM-4829) and STI (RM-4831)... as well other facts that preceded.

From W5YI REPORT TNX



"GOTTA GET TO THE AUCTION

Second, if you like or even love this band, it is truly MANDATORY that you file comments in opposition to the two petitions RM-4829 and RM-4831. HOW to do it appears elsewhere in this issue. Arguments to use appear all over this issue. Read them, think about them and then form your own response to these petitions. Send them in as a formal filing to the Commission. And, don't forget to send copies of them to your Senators, your Congressman, and to the petitioners. You must file separate comments for each petition.

To summarize:

- 1. Use this band, and help as many of your fellow hams as possible to use this band. Use more than just FM, if at all possible.
- 2. File in opposition to RM-4829 and RM-4831. Go for it.

-K9XI

HOW TO FILE COMMENTS WITH THE COMMISSION

During the 220 MHz Telconference Network the evening of August 2, Jim O'Connell, W9WU, of Burbank Tower case fame, addressed the net on the subject of submitting the most effective reply comments to a petition. We print the gist of his remarks here as a service to our readers.

1. A simple letter to the Commission on the subject is OK, provided that the RM number of the petition is prominent at the beginning of the letter. Only one copy of such a letter is needed, and only the Commission staff will see it. They will use that letter, along with all others like it regarding that petition, and digest it into a general summary which will be handed to the 7 Commissioners for the final vote. 220 NOTES suggests that you urge your friends, who otherwise wouldn't care less on this issue, to send a letter to the Commission opposing both RM-4829 and RM-4831. They must send a separate letter against each petition. This is the least they can do for the hobby.

2. For those who are active on the band, a formal reply to the petitions is best. Here are the rules:

- a) You must send a separate response to each petition. The remarks may be identical in both, but the headings must be different to reflect the two different petitions.
- b) You must label your remarks "A Response to Petition No. RM-4829 (or RM-4831)".
- c) Give your name, your callsign, and for good effect, your class of Amateur license and the year you were first licensed. Make it known very early that you are filing IN OPPOSITION to the named petitions.

d) The tone and style of your petition is VERY important. Use clear, logical arguments throughout. Feel free to use the arguments contained in the reply comments which 220 NOTES is filing with the Commission. In fact, you are highly encouraged to do so. However, USE YOUR OWN WORDS. Work around the ideas presented there. If the Commission sees the same text over and over again in remarks on an issue, it actually dilutes the effectiveness of the arguments.

e) NEVER THREATEN THE COMMISSION, and NEVER GET HYSTERICAL in your comments. This kills the effectiveness of your argument, and may hamper the effectiveness of comments filed by others;

f) Even though we've mentioned the Simplex autopatch issue, and other warts on Amateur Radio's collective nose as seen by the Commission, DON'T mention any of this in your replies to these petitions. Those remarks are for other proceedings.

g) Before you begin your comments, do a nose count of 220 MHz activity in your area, any that you know about. Be sure to include that as part of your comments. Include repeaters, control links of your knowledge (you don't need to know the specifics, just that it is happening on 220), ANYTHING. They want proof that we're using the band. Let's give it to them.

h) The format you use can be a big help. For maximum effect, it is best to type your comments, and DOUBLE SPACE THEM. Your word processor will pay for itself on this project. The heading format which you see on the STI petition and the LMCC petition elsewhere in this issue is a standard in Federal Government circles and maybe should be used. Don't forget to add, underneath the heading the words, "Comments on the Above-Named Petition".

i) How many copies do you send to whom? First, the Commission demands that, for a formal filing, which is what we want to see, that a minimum of THE ORIGINAL AND FIVE COPIES BE SENT. For an even stronger effect, send THE ORIGINAL AND TWELVE COPIES, so that each of the Commissioners get to see it, without their staff having chopped it up.

j) If you are making a formal filing, you MUST send a copy to EACH of the petitioners, and you MUST sign an affidavit at the end of the comments stating that you have done so. To fail to do that disqualifies your comments. So, here are the addresses of those who have filed the petitions:

FOR RM-4831 ONLY:

Mr. Harold Davis
Sideband technology, Inc.
1 Technology Plaza
Scottsville, NY 14546

FOR RM-4829 ONLY:

Mr. Charles Meehan
Mr. Russell Fox
LMCC Drafting Committee
1150 17th St., NW
Suite 1000
Washington, DC 20036
[send 2 copies]

Mr. Joseph Rosenbloom
IBM Corporation
2000 Purchase St.
Purchase, NY 10577

Also:

Senator Barry Goldwater
Senate Office Building
Washington, DC. 20

And, of course, you should write to both of your own Senators and your Congressman. The letters to your national legislators should, for clarity, include a cover letter explaining your reasons for sending this on to him. Remember, when your Congressman or Senator hears from a bunch of you on this issue, he HAS to contact the FCC on the subject, and they HAVE to reply.

So there it is. While you're at it, a copy to 220 NOTES will be most appreciated. We will publish the best comments from each in our next issue.

from K9XI 220 NOTES
submitted to Zero Beat by WALOCK

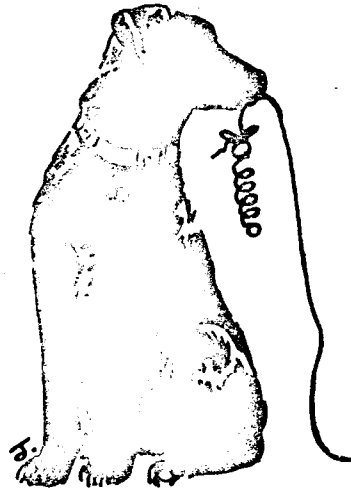


WE WON AGAIN!!!!

The New England Division convention at Boxboro gave us another reason to celebrate! Our newsletter was entered in the Division contest and took third place! Wellsley Amateur Radio Society took First. (As ever! Must be nice to have \$10,000 to spend on the newsletter every year.) They deserve it, but I'd love to beat them just once. The .19/.79 group's newsletter took second. A very nice plaque (not a plague) was given to our editor at the ARRL forum. Many thanks to all who've contributed articles, and made this newsletter special. This was at the October meeting to show off to all.

=====

TIDBITS



KALKBN & WLKK bought 10 foot tower sections at Boxboro. And then asked themselves how they were going to get them home! KALAPR rescued them and lugged them westward... KALGDV volunteered to help with the exams at Boxboro. FB, Larry...The club has been offered the donation of a repeater. Should we accept it?...WLUKR's picture graced the Boxboro program...WLKK drafts the entire family on his antenna projects, even the pooch. When he tells you the SWR is gone to the dogs, don't ask why...KALKPH has his packet radio board up and running...WLNPL's excellent display of antique tubes was shown at Boxboro...KALAPR's flea market display of his home-brew amplifiers was impressive...WBLETS getting the tower up slow but sure. Seems the new wife didn't know she's expected to do all the climbing!... N1FJ, WBLDTZ each got themselves a Macintosh and are busy playing...K1BUB uses his home-brewed telescope to watch the stars...HCRA Ten Meter Net is back on, Thursday nights at 9pm, 28.650 mhz, KALERS, net control...Pat Foley, N1AJZ, is running for Hampden County Commissioner. Vote for a good man!...Talk up the auction. Bring a friend. Bring something to sell. We need your support!...

"PUDGIE as a counter-poise"

=====

LETTERS

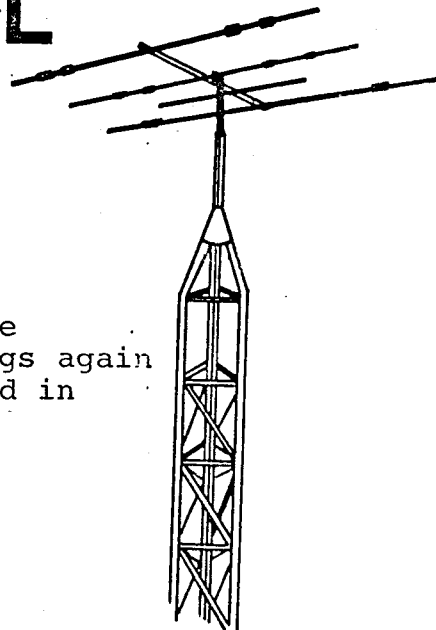
Bob W1WLE writes that he had a safe journey to the new home in Florida. Hasn't got all the ham gear unpacked yet, but hopes to be on 20 and 40 meters soon. Zero Beat has been arriving safely, and Bob will miss being in the January Sweeps for the HCRA. This was his favorite contest for years, and Bob's going to try for some Florida contacts. (Don't forget Eunie, Bob, and Tom- you four can be our Florida HCRA office!..ed) Bob requests that we pass on his best 73 to all the club, and he hopes to talk to many of us on the bands soon.

His new address: Bob Little W1WLE
1550 Damask Lane
phone: 305-589-7675 Sebastian, FL 32958

Scott W1CAC writes from the Boston area offering his QTH for the VHF SS. Next year he's going to Alaska to operate from atop Mt. McKinley. If you'd like to schedule a QSO, contact him! He'll be glad to show the slides from the trip at a club meeting in '86. Best 73 to all and hope to CU Soon.

Address: Scott Darsney, 23 Bradbury St, Allston, MA 02134

Results, 1984 ARRL International DX Contest



Our club score was UP IN '84! Yeah, team!
This contest gives the HF-DX guys a chance to shine every year. We'll be printing the basic set of logs again this year for the 1985 contest. Make sure you send in a score. Dates are listed below.

Our top phone contester was W1DGJ, with 45,225!

Our top CW entry was W1MM, with 19,398 points!

**** THE CLUB SCORE = 78,615 ****

Thank you, everyone who sent in logs!

W1MM W1DGJ K1IJU KA1DNX W1RED WA1CQF K1BE

1985 Contest CW Feb 16-17, 1985 PHONE March 2-3, 1985



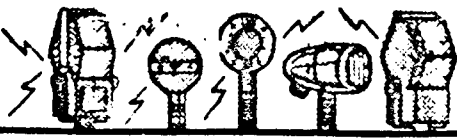
THIS LIST WILL NOT BE RE-PRINTED! MAKE SURE YOU SAVE IT.

- *****
- 28 Oct Sunday The Framingham Amateur Radio Association will hold their Fall Flea Market at the Civic League building on Concord Street in Framingham. The location is on route 126 one mile south of route 9, one block south of the Dunkin Donuts. Talk-in will be on 147.15 +600. Refreshments and parking are available. The doors open at 10:00 am for buyers (admission is \$2.00) and at 8:30 am for sellers (\$10.00 for a six foot table including one admission). Advance reservations are necessary for tables. Make the check payable to F.A.R.A. and send it to P.O. box 3005, Framingham, Ma. 01701.1123(See Rev.side)
- *****
- 2 NOV FRI the Hamden County Radio Association will host its Annual Ham Radio Auction at the Granger School, Rt 57 Feeding Hills, Mass. Doors open at about 6:00pm auction starts promptly at 7:30pm. The Club takes 10% of all sales. For more info, contact John Balboni, AC1T, at 413-786-2438. [51]
- *****
- 11 NOV Sun The Southcentral Conn. Amateur Radio Assoc. (SCARA) will hold its 5th Annual Electronics Show and Flea Market at the North Haven Recreation Center from 9:00 till 3:00pm. Admission is \$1.50 and children under 12 accompanied by an adult will be admitted free. Tables are \$10.00 in advance from the main hall and \$12.00 at the door. Reservations strongly advised. Setup will be at 8:00am for new equipment vendors. Food available. Talk-in on 146.01/146.61 (W1GB). For more info, directions and reservations (make checks payable to SCARA), send an SASE to Tony Vanacore AK10, P.O. box 81, North Haven CT. 06473, or phone 203-484-4175 (home) or 203-239-5321, ext 311 (days) [44]
- *****
- 17 NOV Saturday The Honeywell 1200 Radio Club will hold their annual auction at the Honeywell-Billerica, 300 Concord Rd, Billerica, Mass, 11-4 pm. Club takes 15% Talk-in on 147.72/.12
- 17 FEB Sunday Algonquin Amateur Radio Club will host a Flea Market at the Marlboro Junior High School, on Thresher Street, Marlboro, Mass. Hours are 10-2 pm Admission, \$1.00, tables at door, \$10.00 Talk-in on 146.01/.61
- 3 MAR Sunday Mt. Tom Amateur Radio Association will host a flea market. No other information at presstime.
- 5 MAY Sunday The Hampden County Radio Association will host its annual Flea Market at the West Springfield Lodge of Elks. Tables \$3.00, admission, \$1.00 Contact WA1ZKT, Paul Kress at 413 568 8291 for more information.

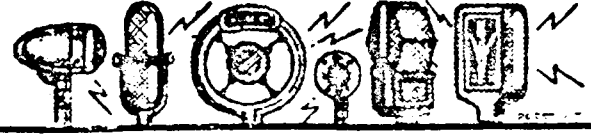
TIDBITS

KALT now on packet radio
...KALKPH now owns a Macintosh-watch for his work in ZB issues.....
Welcome to new club members: WB1DTH, W1HOD, W1WLES, & Adolf Krassler...N1ABJ using that VIC 20 he won on ham radio for RTTY/ASCII
...K1BE gone bear hunting in the gorgeous state of Maine...Order your callbook early through the club and save \$....
N1PF's son is in Alaska and working skeds with his dad....





OPEN MIKE



P7

I would like to share a story about a man who wanted to be a ham. Back in the early '60s he practiced the code by listening to W1AW and around the Novice bands till the wee hours. In a fairly short time he mastered the code and theory and received his Novice ticket. Believing that to be a ham meant to build your own equipment, he constructed a homebrew transmitter from the pages of QST, not by buying all the parts, but, in the best tradition of ham construction, by scrounging, substituting and making what he had on hand work. He contacted stations all over the US with it, using only two crystals in the 40 meter Novice band. He earned a 15WPM code proficiency from the APRL after only a few short months as a Novice. But the General theory was a real problem. His grammar school level education, by then some 50 years old, did little to help. He would ask questions like "What does that little '2' mean when they write it above and to the right of a number?"; and trig functions and base 10 logarithms may as well have been written in Martian. He would literally fall asleep at the rig, then after being awakened, spend another hour or two studying the theory. Perseverance paid off, as he finally passed his General test.

Firmly believing in the importance of local level amateur radio organization, he became a Director of the Hamden County (Mass.) Radio Association, and President of the Valley Amateur Radio Club - both of these organizations are the better for his having been a part of them.

In recent years, a variety of physical ailments conspired to limit his on the air activity, but nonetheless he maintained his keen interest in our hobby.

My father, Gus Rosati, K1PTG, became a Silent Key on March 12, 1984. I'm damn proud of him.

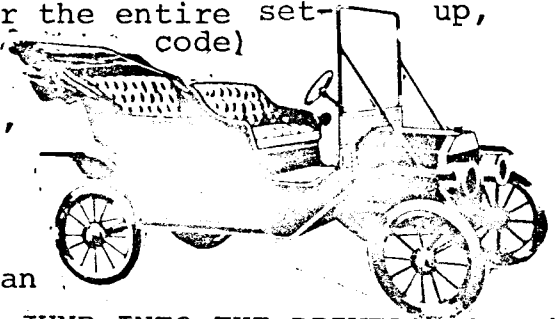
THANKS GO OUT TO:



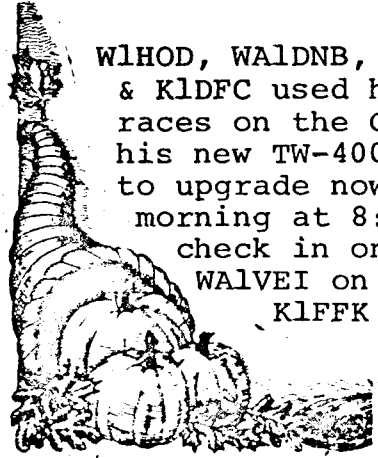
FOR SALE: Computer station package. Complete except for printer. All in mint condition. COMCDORE C-64 computer, 1701 monitor, 1541 disk drive, 1311 joy stick, instruction book, "Using & Programing C-64". Includes program disks, C-64 LOGO with manual and disks, C2N cassette tape recorder, blank disks, and approx. 1 years worth of magazines relating to the C-64. Several other miscellaneous items FREE. \$750.00 for the entire set up, Contact WALYYK, Jack Lomonoco, 786-2556. (413 area code)

TIDBITS

WLHOD, WALDNB, WB1GLX, KALCHD, KALCRX, KBLAZ, & K1DFC used ham radio to help at the boat races on the Connecticut River...KALKPH has his new TW-4000A on the air. Sean will have to upgrade now!...WMEN meets every Sunday morning at 8:30 local time on 3937. Also can check in on area repeaters, including WALVEI on 224.1 atop Mt. Greylock... K1FFK is on packet on 145.01.... Any articles about SET????? Send them in for the December ZB!



JUMP INTO THE DRIVER'S SEAT!
LOAD UP THE GOODIES!
BRING IT ALL TO THE AUCTION!
FRIDAY NOVEMBER 2nd





W5JJ

Carl C. Drumeller

OLD-TIME RADIO

Pa and Ma of Amateur Radio

Old-timers will recall the major role Pa Ford Spark Coil and Ma Bell Telephone played in supplying parts for early-day wireless experimenters. I can't speak for the amateurs who were active the first two years after the end of the Kaiser War, but those of 1921-23 drew heavily upon those two sources of material.

One's first thought would go to the Model T Ford spark coil as the main element of a transmitter. They were readily available. Every garage had a stack piled in its junk heap, yours for the asking. Although these had been unsatisfactory in an ignition system, they'd perform quite well in a transmitter if you were patient enough to play around a bit with the adjustment of the vibrator. Screwed down to just the right degree of tightness, they'd give that high-pitched musical tone so eagerly sought by users of "squeak boxes."

Torn apart, the primary wire could be (and was) used as an antenna, even though you had to tear up many coils to get enough wire to make the multi-wire inverted L antenna that was considered the only type worthy of use in those days.

The primary plus secondary, connected in series served as the inductor for choke-coupled audio frequency amplifiers; the coupling capacitor could be the capacitor from the coil. Usually, though, the capacitor was torn apart and small portions of the foil and paper used to make bypass capacitors to be used across one's headphones.

Nor were the spark coils the only useful by-product of the Model T Ford. Its magneto provided copper ribbon that some preferred to wire for antennas. The magnets sometimes were used close to detector tubes to obtain greater sensitivity. There were those who doubted the alleged improvement, but a study of serious textbooks reveals that magnets were used to control the electron flow between cathode and anode before De

Forest introduced his control grid. Who knows? Maybe that Ford magnet set up just the right kink in the tube's characteristic curve to enhance detection!

Ma Bell was a great donator, too. It's a safe bet that almost every experimenter with wireless telephony used a microphone "liberated" from Ma Bell. Maybe that's why most of those radiotelephones sounded so horrible; Ma Bell's early microphones had much to be desired in quality. Later, in the '40s, a much better microphone button was used in telephones. If one held the microphone current to a low value, quite good voice quality could be had.

Some of Ma Bell's equipment contained iron-core coils wound with silk-covered wire. This wire often was used for winding tuning coils of various forms.

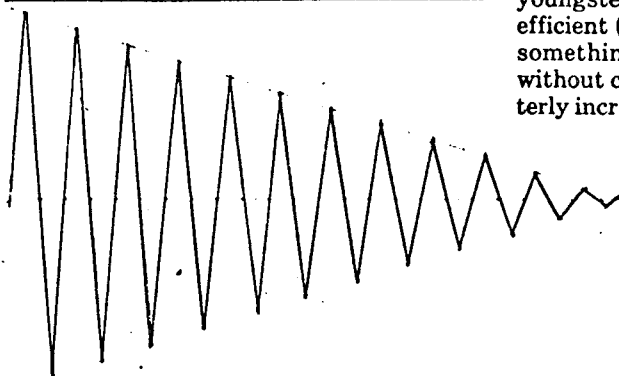
Salvaged telephone wire was the source of guy wires. It could be bought at a very reasonable price, was of high quality, and seemingly lasted forever.

Let's zip back a bit to that pleasant note from a spark coil. Most amateurs of that time believed a high-pitched note indicated a low-decrement signal. Amateurs in general, as well as a goodly number of professionals, had only a hazy idea about decrement.

In magazines and in bull-sessions there were "learned" discussions about decrement and about "shock excitation." It was generally held that the antenna system was shock-excited into oscillation at signal frequency. This probably is correct, considering that with the Class C stage the resonant tank circuit is "shocked" into oscillation through a full 369 degrees by a pulse of approximately 90 degrees duration. The matter of decrement is not so easily shrugged off.

The pulse from a spark gap is not a single cycle (or part thereof) but a full cycle of maximum amplitude followed by a train of additional cycles of decaying amplitude. At least one manufacturer, Kilbourne and Clarke, introduced a resistor into the LC circuit with the intent

THANK YOU - WORLD RADIO



Damped wave or pulse from a spark gap. Note that fewer than the needed 24 complete are completed. Such a wave would not meet the requirement for no fewer than 24 complete cycles.

of giving a quickened decay to trailing cycles. One wonders what this must have done to the decrement of the station! I suspect (but don't know) that the loaded Q of the primary oscillatory circuit while coupled to the antenna system was the major factor in determining the station's decrement. Perhaps some old-timer can provide a full explanation.

Information about decrement and how to obtain a low (desirable) figure is hard to come by. Let's see how decrement is defined in the 1927 edition of S. Gernsback's *Radio Encyclopedia*.

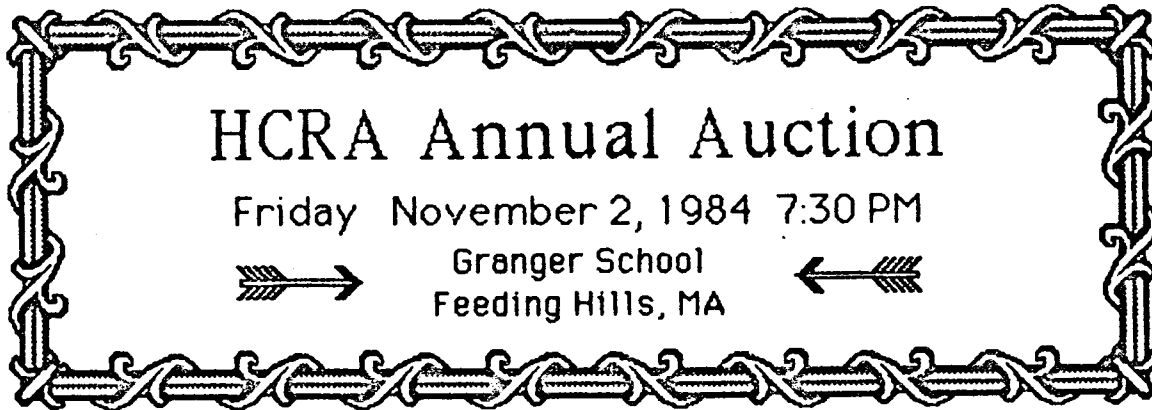
"DECREMENT: A term used to indicate the rate of decay or dying out of an electrical oscillation that is subject to damping."

Now let's read a little bit more from the same source — "DECAY OF CURRENT: It will be noticed that the decrement or the rate of decay of the oscillations directly affects the number of oscillations in a wave train that will be useful in transmitting signals.

"For instance, if a certain oscillation in the figure should represent the smallest voltage that will operate a detector, it is evident that all oscillations in the wave train that have smaller amplitudes will be useless. Consequently, the lower the decrement of the wave, the greater will be the number of oscillations before the amplitude becomes too small for useful purposes. This likewise means that a greater amount of the energy in the wave can be utilized."

Very interesting, but somehow I feel this is not the whole story. It doesn't tell us much about why the government required a decrement of 0.2, which was obtained when there was a minimum of 24 whole cycles of oscillation in the antenna system. This strongly hints that there was a direct but inverse relationship between decrement and wave broadness. One method of measuring decrement strengthens this presumption. That method involved measuring signal strength at a resonance with a meter in a high-Q LC circuit, then detuning a given amount off-frequency and noting the percentage of signal decay.

A minimum, "dry bones" type of spark transmitter was easy to build, as many a youngster of tender years proved. But an efficient (and legal) spark station was not something one could slap together without considerable knowledge... or utterly incredible luck! □

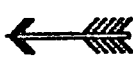


HCRA Annual Auction

Friday November 2, 1984 7:30 PM



Granger School
Feeding Hills, MA



The HCRA wants YOU!

To be at its Annual Auction Friday
November 2 at the Granger School
in Feeding Hills, MA.

Please, no smoking
in the school! Thank you!



NO SMOKING

(paid advertisement)

RG-8 A/U COAX CABLE FOR SALE!!!!!!

RAFFLE!!!

A LIMITED AMOUNT OF THIS HIGH QUALITY RG-8 COAX IS ON SALE NOW. SOME LOCAL RADIO STORES HAVE BEEN SELLING A POOR GRADE FOR .37¢ PER FOOT. HERE'S A CHANCE TO SAVE SOME MONEY AND GET BETTER PERFORMANCE.

We will be selling raffle tickets, 3 for \$1.00 at the auction. Adds that much more excitement!!

PRICE: ON A SINGLE ROLL OF 500 FEET, .25¢ per foot.
IN LENGTHS OF 100 feet, (or multiples)
.27¢ PER FOOT

- 1st Prize: RINGO RANGER
- 2nd Prize: 1985 CALLBOOK
- 3rd Prize: Subscription to
- 4th Prize: WORLDRADIO

We'll bring your cable to the next ham meeting. You can order over the phone, but there is only a limited amount, and cash customers will be taken care of first.

Mail to: Jeffrey J. Duquette K1BE
P.O. Box 346, Southwick, Mass 01077
Phone: Day 730-3253 Evening before 9 PM 569-6739
Make your checks payable to "Jeffrey J. Duquette"

Any other donations of prizes would be appreciated.

Length in feet (100 ft intervals only) Amount enclosed
x .27¢ per foot =

500 foot roll @ \$125. each =

NAME _____ CALL _____ PHONE _____

COD, OR CHECK ENCLOSED ONLY! We reserve the right to sell to the cash customers first.

Loss in db per 100 feet

TYPE	IMPEDENCE	Loss in db per 100 feet						
		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

For Sale

Complete DEC Rainbow 100
Computer System

Two CPUs, 256Kb RAM, dual disks,
Graphics option and 13 in. color monitor
1200 baud modem, graphics printer
CPM & MS-DOS, Lotus, Basic and more...

Bob KA1KPH 413-786-7966

SCHEDULE OF EVENTS
(Subject to change)

NEXT MEETING: Friday November 2nd
ANNUAL AUCTION!!!!

Friday December 7th CLUB SLIDES FROM PAST
HOME-BREW NITE EVENTS! Bring yours in, too.

Friday December 7th MTARA CHRISTMAS PARTY

Friday, January 4th KLFO WILL EXPLAIN HOW TO
STACK THOSE ANTENNAS.

Saturday, January 12th HCRA HAM EXAMS-WILBRAHAM

January 19-20 ***VHF SWEEPSTAKES****
(Tentative dates)

Friday, February 1st KALKPH SHOWS US HOW EASY TO
HOME-BREW NITE IS TO CONNECT UP PACKET
RADIO!

February 16-17 **ARRL DX CONTEST-CW**

Friday, March 1st AMATEUR PAST SCAN TV!

March 2-3 **ARRL DX CONTEST-PHONE**

Friday, April 12th NASA SPACE SUITS- HOW THEY'
-RE DESIGNED AND BUILT

Sunday, May 5th FLEA MARKET AT WEST SPFLD
LODGE OF ELKS

Friday, June 7th ANNUAL MEETING AND BANQUET
ANNUAL AWARDS CEREMONY

US Callbook now includes Canada and
Mexico!!!



The HCRA is again offering Callbooks!

We will have a limited number of new 1985 US and DX
Callbooks. The cost is \$15.00 each, either edition. You
can order yours today by contacting Ron Beauchemin,
WB1ETS, 75 Robinson Rd., West Springfield, MA 01089

Hampden County Radio Association, INC
c/o Jeffrey J. Duquette
P.O. Box 346
Southwick, MA 01077

POSTMASTER: IF UNDELIVERABLE,
PLEASE RETURN.

ACIT EY 10/84

FIRST CLASS

**IF YOUR NAME IS BLUE, YOUR
MEMBERSHIP HAS EXPIRED!**