

Zero Beat

Our 39th ARRL affiliated year
Special Service Club

Hampden County Radio Association, Inc.

Serving Greater Springfield, MA

Fall Auction

Its time for the HCRA Annual Fall Auction. It will be held on Friday November 6th, 1987 at the Granger School in the center of Feeding Hills, MA. The doors will open at 6:00 PM, and the auction will start promptly at 7:30 PM. If you are looking for some equipment, or just want to unload that boat anchor, this is the place to do it!

Here are the auction rules: The HCRA takes 10% of the final selling price. No minimums are allowed, but you may bid on your own items. If the owner is the highest bidder the HCRA will waive the 10%. The Auctioneer has the right to combine items in the interest of time. The decision of the Auctioneer is final.

If you should have any further questions, please contact Steve Nelson, WA1EYF, at 413.596.8216

1988 VHF Sweeps

VHF enthusiasts should note the dates of the upcoming VHF Sweepstakes, January 23-25. This is presently scheduled to be an "off" weekend for pro football, one week before the Super Bowl. This weekend was selected, of course, prior to the strike by players. Who knows what impact that may have on the game schedule? Complete rules will appear in December QST; the club competition rules, with some revisions, will appear in January QST.

Please start thinking about the contest; now is a good time to get in any last minute antenna work you may need before winter sets in. The HCRA is looking for another top notch effort again, and hoping for a top-three place. Every point counts, so please mark your calender now for the VHF Sweeps weekend!

Open House

A reminder that W1AW will be open Saturday, October 24 from 10 AM to 4 PM. The station is normally closed on weekends. Be sure to bring a copy of your license if you'd like to operate W1AW.

November 1987

VE Exam Results

The Hampden County Radio Association sponsored a volunteer exam session on Saturday September 12, 1987 at the Hampden-Wilbraham Regional High School (Minnechaug), Wilbraham, Mass.

Two sittings were held. The first sitting was for Jeff Dunlap KA1BPA, who had to return to College the week before our scheduled exam. He passed Technician and was able to talk to his folks on 2 meters on his way to school.

Eight candidates were examined at the regularly scheduled sitting with Bob LaFleur achieving General. Since he was unlicensed, he has to wait till the FCC sends him his ticket with his call sign, before he can operate.

Other candidates achieving General were Bob Snigg KA1MZF, Jay Stephenson KA1PGH, and Tom Paradis KA1PWA. Paul Cappa KA1OWZ upgraded to Advanced. Congratulations to all.

The VE team consisted of John AC1T, Jack WA1YYK, Betty WB1FIQ, Don WIRED, Rusty NM1K and Yorke K1BXE.

The next session will be held at Minnechaug on Saturday December 12, 1987, at 8:30 AM. Candidates should bring their original license, a photocopy of their license, another means of identification (i.e. drivers license; etc) and a check made out to the ARRL-VEC for \$4.35.

At the December HCRA meeting we will be asking for VE's to assist in the December session.

de Yorke K1BXE

Thanks

Your *ZERO BEAT* editor is Bob McCormick, KA1KPH. All members are welcome to place free Wanted or For Sale ads in *ZERO BEAT*.

The HCRA would like to thank the following contributing editors and sources, who have brought you this month's issue: The *ARRL Letter*, KA1KPH, *The DX Bulletin*, WA1EYF, KA1MEW, AC1T, K1BXE, N1DPM

New Handbook Is In!

The HCRA has received its shipment of the 1988 ARRL Handbook, and will have them available for purchase at the November Auction. Since quantities are limited be sure to stop by early if you desire a handbook. The club will also take orders in writing via the PO Box, so feel free to write.

Remember, the club offers all ARRL books at a discount, so it pays to buy the HCRA way!

There are still a limited number of ARRL license manuals available. Stop by the Auction if you need a book!

Rare Award

Fred N1DPM reports receiving a most unusual award! Recently he worked WB2JKJ, who is on during every VHF contest. Shortly thereafter he received a QSL card and a large packet of information regarding the station. It seems that WB2JKJ is a club station at Junior High 22M "at the core of the big apple" in New York City. They further explain that the club consists of 180 students who are participating in an "English through Amateur Radio" class at the school.

N1DPM, in a rare case of responding to a QSL card, sent them one of his one of a kind unique QSL's. Needless to say Fred was more than suprised when he received an award (!?) for the most outstanding QSL card received. It appears that the 180 members of the class review each and every QSL, and pick one for the award. They have also invited Fred to stop by and visit if he is in the area!

de N1DPM & KA1KPH

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Peach Festival

On Saturday September 5th, 14 members and friends of the HCRA participated in organizing and executing the town of Wilbraham's annual Peach Festival Parade. This year Steve WA1EYF was approached in February by the parade committee requesting that we again assist in communications both before and during the event. The officials realized that communication would be absolutely essential to the successful execution and control of a parade that stretched for almost 1 1/2 miles.

Those participating were: Bob KA1KPH, John AC1T, Ray WB1GLX, Yorke K1BXE, Betty WB1FIQ, Rusty NM1K, Dave KB1MU, Pat NICET, Al KA1LXT and his XYL Linda, Mike W1DGJ, Cliff W1UWX, Dave KA1MYN, and Steve WA1EYF. The parade committee, Peach Festival Chairman and public officials were very impressed with our organization and assistance and asked us to participate next year. Kudos to all those who helped out.

de Steve WA1EYF

Oscar 10 Relapse

On August 11, 1987, OSCAR-10 command station operator Peter Guelzow, DB2OS, reported that the satellite had returned to ill health. For the next three months, OSCAR-10 should not be used for communication. Problems reoccurred because of the estimated angle of the sun - it is currently -40 degrees, and the illumination has decreased to under 70%. During the next several months, illumination will drop to nearly 0%.

DB2OS's report continued to say that the power budget is unbalanced, and the battery completely discharged. This was observed by FMing on the general beacon and from signals in the transponder's passband.

OSCAR-10 can no longer be automatically controlled by the on-board computer (IHU) because of the radiation damaged memory. To extend the satellite's life, and to ensure maximum battery health, total abstinence is required until the sun's angle is able to charge the battery. The next period of communication begins around November 20, when illumination is better than 75%. Watch the amateur satellite report for further information.

From September 1987 QEX

November 1987

Younger Resource

As the ARRL has pointed out, there is a need to get the younger generation interested in amateur radio. By "younger generation" I mean kids in fourth, fifth, and sixth grade. These kids are old enough to have the basic skills to study and complete a Novice class license but are still too young to be distracted by the opposite sex or automobiles. These kids are at the ideal age to get interested in amateur radio.

I also think the time is right in the schools. About a month ago I sat in the auditorium of my daughter's school and listened to a science teacher describe the curriculum for the year. At the end of his description he said that he would welcome any suggestions or ideas to add to his program. I'm sure he would have been very receptive to a week on amateur radio where his kids could learn about electricity, communication, and a myriad of other related topics from some real "hams."

The reason I didn't approach him is that I felt that we should have a program all prepared along with the people who are willing to give the time. Also, we should be ready to carry this whole idea a step further and set up a class for these kids (and their parents) either after school or on Saturday that will assist them in obtaining a Novice license. We benefit the educational process and the amateur community to boot!

The problem is people. We need amateurs to go into the schools, teach the classes and assist with the program. Unfortunately, much of the time would have to be during a regular work day for most of us. This is where our retired or second or third shift working members can help. You can go into the schools and give the kids that incentive to get started.

If you have not guessed it by now, I'm looking for volunteers (so what else is new?) from that portion of our membership that would be available at those times. You don't have to be a public speaker or a teacher, just a ham that can use your experiences to help spark that interest in someone else.

I would like to try a program such as I've described sometime in the Spring of 1988. If you have the time on a Saturday or during the week please give me a call. I'll make sure that you have an outline and everything you need to get started (I'll even go with you on the first try). Give back to amateur radio some of the fun you've had over the years.

de Steve, WA1EYF, 413.596.8216

Net Directory

Western Mass Slow Speed (traffic) net meets Monday thru Friday at 7:30 PM on 3.562 MHz

Many ARES nets meet on Sunday morning. Some are: On 3.937 MHz at 8:30 AM, on K1FFK/R 146.91 MHz and KA1KPH/R 449.175 MHz at 9:00 AM, on K1FFK/R 53.23 MHz at 9:15 AM. Please check in!

YCCC Swap Net meets at 8:00 PM Thursdays on 28.303 MHz

Western Mass Traffic Netmeets at 1 PM Monday - Friday on K1FFK 146.91 MHz

Western Mass Phone Net (SSB) meets Monday - Saturday at 6 PM on 3.937 MHz

Western Mass (CW) net meets evenings at 7:00 PM on 3.562 MHz

Ten Meter Rag Chew Net (SSB) meets Sunday at 7:00 PM local on 28.400 MHz

Please inform us of your net schedules, and we'll list them here!

Local ATV Activity

Now that fall has come and cooler weather has set in, its time to turn on your TV and see the new fall lineup of ATV programming! Yes, this could be the new network that gives all the others a run for their money!

Western Massachusetts and Northern Connecticut is a hotbed of fast scan TV activity. Tune in to 439.250 MHz simplex and 426.250 MHz (W1HGJ/R) on Thursday evenings between 8 and 9 PM local time for the latest in fall programming.

For more information, you can also listen to KA1JMM/R (147.105 MHz) where most of the coordinating activities take place. A partial list of active stations include: W1HGJ, KA1JEB, WA1IAO, W1NYP, K1LRB, AC1T, and WA1HFF.

Cable Alternative

A recent news release provided what may be the ultimate solution to cable television, as well as possibly solving TVI problems at the same time. British Telecom Research Laboratories has developed a millimeter-wave based, multichannel, multipoint video-distribution system.

The "terrestrially sited satellite" provides 10 to 20 channels of standard television, including High Definition TV. Signal coverage ranges from a 1 to 2 km radius around a transmitter mounted at a height of 30 to 45 meters. Receivers would use 15 centimeter round high-gain dish antennas.

W1NY-1

Towards the end of August, a Mirage B215 2 meter power amplifier was added to the W1NY-1 digipeater. This increased the output power from 35 watts up to 100 watts. It also allowed the KLM amplifier, which has been in service on the digipeater for the last year, to be returned to Art W1KK. The HCRA offers many thanks to Art for allowing his amplifier to be kept in service on the digipeater for such a long period of time. As a result of the purchase and installation of a new amp the HCRA now owns all equipment used on the digipeater.

The next planned digipeater upgrade will be replacement of the Cushcraft Ringo Ranger antenna. The antenna was removed from the tower last fall and re-conditioned by Fred N1DPM. This effort dropped the previous 2:1 VSWR to 1:1. Subsequent storms and weathering have taken its toll, and the VSWR is back up to 1.5:1. Anyone familiar with the construction of a Ringo Ranger will agree that they do not survive the elements very well. An attempt will be made to replace the antenna before winter sets in. A decision on a replacement antenna will be made at the next Board of Director's meeting.

de John AC1T

Interference...

During the last week of September, a very strong carrier was observed on the 70cm FM band. While scanning with my Kenwood TW4000, the rig kept locking up from 448.185 through 448.365 MHz. The carrier signal had a strong 60 Hz type "buzzing" sound, but no other modulation. It was so strong that I could not copy K1ZJH/R on 448.200 MHz, even when I was only five miles from Mount Tom! The interfering signal was continuous. It changed frequency only slightly over a three day period, such that it would also wipe out N1BPU/R on 448.225 MHz on Mount Wachusett. It seemed probable that a commercial transmitter was producing spurious emissions which were bleeding into the 70cm Amateur band. More investigation was necessary.

Several phone calls were made, including one to the Director of Communications for the City of Springfield. He indicated that the same type of interference was present on 463.100 MHz, the C-MED frequency which links area hospitals together. The problem was more serious than just interference to Amateur communications. We discussed various strategies for tracking it down, but more help was needed.

Bob KA1KPH was able to easily copy the signal halfway between Springfield and Hartford in East Windsor and Windsor Locks. Pete N1AGV also determined that the source of the interference was near or about the City of Springfield. All antenna readings seemed to point to Springfield, but finding the offending transmitter could be like looking for a needle in a haystack!

At the HCRA club meeting on Friday, October 2nd, I announced that help from club members was needed to track down the interference. I received good input from several people. Using a tunable scanner, I was able to receive the interfering signal on 438.250, 443.230, 448.205, 453.175, 458.1375, 463.1125, 468.0875, and 473.0575 MHz. It was all over the place! Each spur was separated by about 5 MHz, with the loudest signal being received on 453.175 MHz.

On Saturday October 3, Al NA1W did some DF'ing with a portable field strength meter. I also obtained a beam heading using a 440 MHz vertical yagi. A step attenuator was also necessary as the signal at my house put the S meter against the peg! Al tracked the signal down to a callbox on Interstate 91. A call was placed to the State Police who sent a car down to check the boxes in the area. The found the ones in question had their guts removed for service. We narrowed the signal down to a highly congested area for RF, the Interstate 291 and 91 interchange, but our first lead was wrong!

Conversation was held with Jim N1DUY, and Ed WA1PLS. It was thought that the 453.175 MHz frequency was a paging service. Al NA1W heard a CW ID about every 20 minutes and what sounded like ASCII data being sent. The call letters (KKS 823) could not be found in any of the directories which Jim or Ed had. We were getting suspicious that the source could be coming from Mercy Hospital.

Another call was placed to the Communications Director for Springfield. He in turn contacted another 2-way radio dealer, who recognized the call letters as being that of a paging service indeed located at Mercy Hospital. Service monitors were turned on, and it was verified that the paging service was locked up and continuously transmitting. At 8:30 PM Saturday both individuals decided to pack up their test equipment and visit the hospital.

An hour later I received a telephone call from Mercy Hospital. The output of the paging transmitter looked like a Christmas tree on the portable spectrum analyzer! A high VSWR on the antenna was observed, and the transmitter was overheating. The system was shut down to allow it to cool off, and the output power was reduced from 15 watts to 5 watts. An hour later it was turned back on and all spurious emissions were gone!

Unfortunately, about an hour after they left the transmitter locked up again and the spurs re-appeared. Formal service was performed on Monday, October 5th. No problems have occurred since then. The source of the interference was not easy to track down, however, it would have been even more difficult if not for the assistance of the Amateurs who volunteered their services. Through self-policing of our frequencies we can provide valuable help to neighboring commercial radio services of which the general public depends on for public needs and safety.

de John AC1T

EA0JC Visits JPL

When King Carlos of Spain visited the Jet Propulsion Laboratory in Pasadena, CA on September 30, Amateur Radio was given some recognition. His Majesty, who holds the call EA0JC, was greeted there on behalf of US radio amateurs by ARRL First Vice President Jay Holladay, W6EJJ, who presented him with a copy of the new ARRL Operating Manual.

Please remember that all members' dues are due by the first of November. A membership form was provided in last month's Zero Beat, and was available at the meeting. Membership forms will be also available at the Auction, and dues can be paid in person there also. We gladly accept dues by mail; use the club PO address. Thanks to all who have already renewed!

HCRA Auction
November 6th, 1987

Thanks for your support!

Dates to Remember 1987

Oct	24-25	CQ WW DX Phone
	25	NoBARC auction
Nov	6	HCRA Auction
	7-9	ARRL Sweeps CW
	21-23	ARRL Sweeps SSB
	28-29	CQ WW DX CW
	29	NoBARC meeting
Dec	1-2	Yankee Vernon test
	4	HCRA meeting
	4-6	ARRL 160m contest
	6	YCCC meeting
	12	VE exam Wilbraham
	12-13	ARRL 10m contest

Dates to Remember 1988

Jan	8	HCRA meeting
	23-25	VHF Sweeps
Feb	5	HCRA meeting
	6	YCCC meeting
Mar	4	HCRA meeting
Apr	1	HCRA meeting
	9	YCCC meeting
May	6	HCRA meeting
Jun	3	HCRA meeting
	5	YCCC meeting

**Get your station ready for
the VHF Sweeps!**

HCRA Meetings

First Friday of each month at
Feeding Hills Congregational Church
Center of Feeding Hills
Intersection of routes 57 & 187
Doors open at 7:30 PM
Meeting starts promptly at 8:00 PM

**Annual Fall Auction
November 6th, 1987
Granger School
Feeding Hills Center**

see inside for more info

Future HCRA Meetings

<u>Club Meeting</u>	<u>Topic</u>	<u>Board Meeting</u>	<u>Host</u>
6-Nov-87	Annual Auction	10-Nov-87	WB1ETS
4-Dec-87	Holiday Fest	none	Happy Holidays
8-Jan-88	VHF contest	12-Jan-88	WB1BZH
5-Feb-88	Film	9-Feb-88	
4-Mar-88	Repeaters	8-Mar-88	
1-Apr-88	Telecommunications	5-Apr-88	
6-May-88	DX trip	10-May-88	
3-Jun-88	Annual Banquet	none	

For Sale

14 element 2m yagi on a 24 foot boom
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A pair of 22 element N1DPM antennas, as
described in Zero Beat, with 1/4 inch heliax
phasing lines and half-wave power divider,
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A 3CX800A7 tube including: socket,
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Contact Fred N1DPM 413.786.7943

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WHEN?:

FRIDAY NOVEMBER 6, 1987

DOORS OPEN AT 6:00 PM FOR SETUP & INSPECTION

AUCTION STARTS AT 7:30 PM

WHERE?:

**GRANGER SCHOOL
CORNER OF ROUTES 57 & 187
FEEDING HILLS, MASS.**

AUCTION RULES:

THE HCRA TAKES 10% OF THE FINAL SELLING PRICE. NO MINIMUMS ALLOWED BUT YOU MAY BID ON YOUR OWN ITEMS AND IF THE OWNER IS THE HIGHEST BIDDER THE HCRA WILL WAIVE THE 10%. THE AUCTIONEER HAS THE RIGHT TO COMBINE ITEMS IN THE INTEREST OF TIME AND THE DECISION OF THE AUCTIONEER IS FINAL

**FOR FURTHER INFORMATION CONTACT:
STEVE NELSON WA1EYF
TEL: 413 596-8216**

