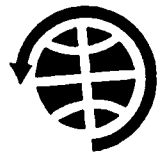




# ZERO BEAT



AMSAT

## Hampden County Radio Association

Springfield, MA October 1985 ARRL Affiliated, 37th Year

### Next Meeting

Friday October 4, 1985

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

Join the American Radio Relay League  
Support amateur radio  
Mark 0038 on your application, and  
give our club the credit!

#### IN THIS ISSUE:

- Spacelab D1
- CQ DX
- Radio memories of W1JWV and much more!
- Mexican earthquake
- VE news

The next HCRA meeting will be held Friday, October 4<sup>th</sup> at 08:00 PM at the Feeding Hills Congregational Church in the center of Feeding Hills. The topic of discussion will be "Electric Power Distribution". We are fortunate to have two speakers arranged by Bob KA1MPA. Roscoe P. McEacharn, Director - NEPEX, of the New England Power Pool, will talk about the coordinated six state operations of the electric utility companies. Hugh C. MacKenzie, Regional Superintendent of Operations for Northeast Utilities, will discuss electric power distribution. Between speakers, Bob Barrett, KA1MPA, will present a few comments on electric power generation.

**HCRA Annual Auction**  
Friday November 1 1984 7:30 PM  
→ Granger School ←  
Feeding Hills, MA

**SPACELAB  
COLUMBIA  
MISSION D1  
DPOSL**



**UPLINK ON 70 CM  
DOWNLINK ON 2M  
W1WY WITH SEATTLE  
AUDIO ON 145.13  
M1Z IN SPRINGFIELD**



### The HCRA wants YOU!

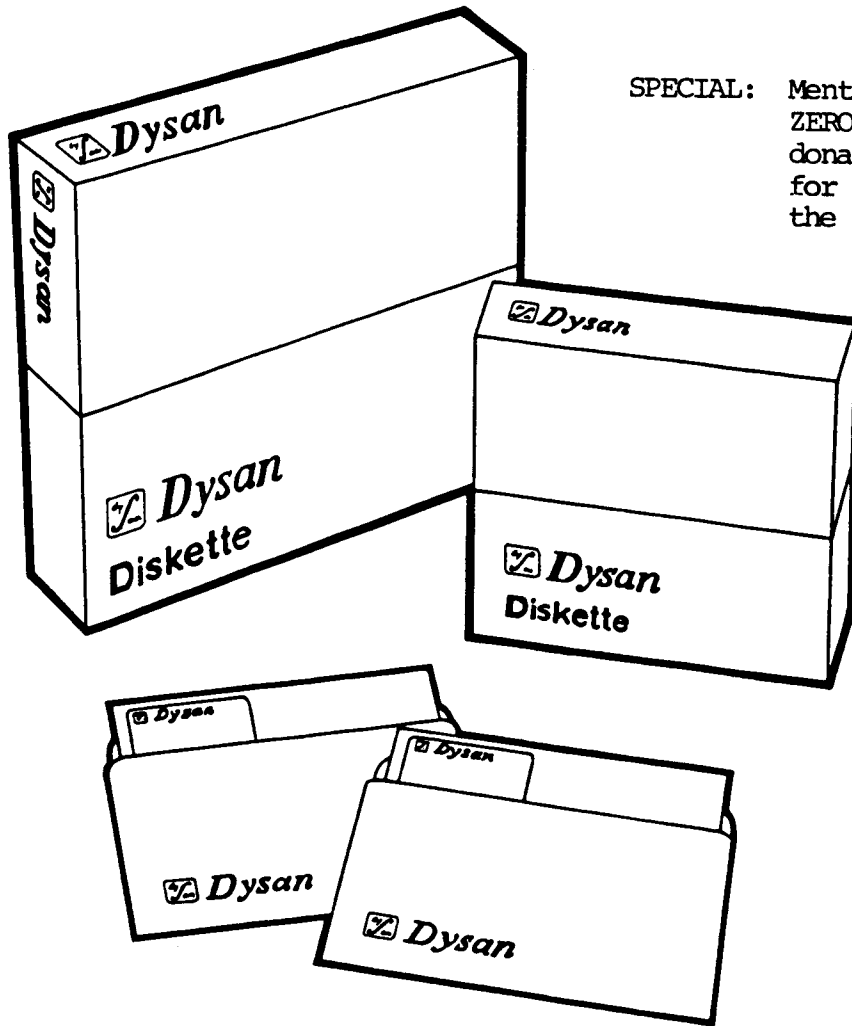
To be at its Annual Auction Friday November 1 at the Granger School in Feeding Hills, MA.

Please, no smoking in the school! Thank you!



Dues are \$9.00 per season, September thru June. Please mail to: N1AEH, Greg Stoddard, 1500 Mapleton Avenue, Suffield, CT 06078. Thank you!

# Dysan. The Finest Quality Diskettes Available.



SPECIAL: Mention the ad in ZERO BEAT and a donation will be made for every box sold to the repeater fund!

Dysan's 5¼" 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.

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NEW ENGLAND  
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Springfield, Mass 01101

Our friend JERRY GRIFFIN, WA1PGT is your local dealer! Call for special prices.

413-567-0367 (Evenings)

 **Dysan**  
CORPORATION

**DPOSL  
SPACE SHUTTLE  
COLUMBIA  
MISSION D1**

**Volunteer Examiner Program**

Here's the latest news and information about the HCRA's Volunteer Examiner Program.

Two test dates are scheduled right now.

Saturday, October 19th

Saturday, December 14th

Both are at 9:00 a.m., in the Wilbraham High School, on Main Street. Walk-ins are ok, but arrive early so the paperwork can be completed. All classes of license will be tested. Bring your original license and a copy, and any certificates you've received from other VE sessions.

The club wants every extra class license to help with the VE Program. Just send a note to Yorke Phillips, KIBXE, 235 Ames Road, Hamden, MA 01036 to get an application. Forward it to the ARRL, take an open book exam and you will get accredited. To find out more, contact Yorke at (413-566-3010), or help out one of the exam sessions. (See dates above.)

People often ask "when will the questions in the exam pool be changed?". Here's the dates when the test questions will be different:

Novice	January 1, 1986
Tech./General	April 1, 1986
Advanced	August 1, 1986
Extra	October 1, 1985

The question of upgrading while your new license is pending has been addressed by the ARRL. A special procedure or "Holsopple" has been instituted. Not to be curt, but it is too complex to explain here. Suffice to say you can test with just the Certificate of Successful Completion!

That's all for this month. Any questions or suggestions, write this column, c/o Zero Beat!

In October, 1985 the D1 mission aboard space shuttle Columbia will lift off. Two German hams will operate Amateur Radio during this mission! At least 6 passes per day of 12 minutes each are possible. The call sign DPOSL will be used.

Calls will be of 3 types:

- 1.) Beacon operation with morse ID, no receive.
- 2.) Beacon operation with a recorder taping any incoming callsigns. i.e. "CQ de DPOSL recording on tape K."
- 3.) Two way contacts on FM.

Here are the frequencies. NOTE: They will be operating cross band!

DOWNLINK:	UPLINK:
145.450 mhz	437.125 mhz
145.475	437.175
145.550	437.225
145.575	437.275
	437.325
	437.375

So you will listen for DPOSL on two meters, and transmit on 70 cm.

WINY will carry the space shuttle audio on 145.13 mhz, with bulletins regarding pass times, and other information. (This is a lot of work, so keep your fingers crossed that it will be pulled together!)

This information is accurate and up-to-date as we go to press. However, due to the rapid changes during any of these shuttle missions, listen to the club's repeaters for updates. - (KAIKPH 449.175; or KAIJHM 147.105). Plan your effort now because once it lifts off, no one has the time to answer your questions. (i.e. STS51F is an indication of how frantic it gets!) Any major changes will be reported at the October 4th meeting.

**HCRA CLUB STATION  
WINY WITH SHUTTLE  
AUDIO ON 145.13  
MHZ IN SPRINGFIELD**

**DPOSL  
UPLINK ON 70 CM  
DOWNLINK ON 2M**



CQ DX

by

W1DGJ

PETER I ISLAND possible December or January operation by JF1IST ... CHRISTMAS ISLAND VK9XJ on 14.170 at 12 to 13Z ... ARRL to get listed in the DXCC, published in the December QST, your cards must be in by September 30th ... MAURITANIA 5T5SL active on 14.277 at 17Z ... HEARD ISLAND watch for VK0CC on 14.220 in October ... SPACELAB October or early November mission with two German hams aboard, DG2KM and DD6CF, some VHF activity planned ... JORDAN JY8GW on 7.004 at 02Z ... ANDAMAN ISLANDS rumored possible activity later this month ... CONGO TN8EE on 14.029 at 20Z ... EASTER ISLAND CEOZIJ on 14.170 at 12 to 13Z ... MAYOTTE PA0GMM/FH operating September 26 to October 1 ... NEW ENGLAND DXCC DINNER October 12, in West Concord, MA contact K1VHS ... CHATHAM ISLAND ZL8AA on 3.795 at 10Z ... GALAPAGOS ISLAND expedition there at end of October ... COMOROS D68DX on October 1 and 2 ... SAO TOME S92LB on 14.183 at 21Z ... JAPAN/U.S. signed reciprocal operating agreement ... AUCKLAND ISLAND ZL9AA for 2 months on 160 and 80 meters ... DJBOUTI J28EI on 7.003 at 23Z ... LICHENSTEIN HB0NL until the end of October ... QATAR A71AD on 160 at end of October ... WESTERN SAMOA 5W1CW on October 12 ... BELIZE V3CQ operating October 1 thru 7 ... CAMBODIA XU1SS on Thursdays on 14.198 at 12Z ... CHAD N7DF/TT8 on 14.180 at 17Z ... TOKELAU ZL1AM0/ZK3 at end of October ... NORTH COOK ISLAND ZK1WL there until December ...

DEAR CQ DX: What country follows the U.S. in amateur population? ANSWER: Actually the U.S. is second, led by Japan. The U.S.S.R. is third in the world with 75,500 operators, 45,000 stations, and 140,000 members in the Central Radio Club. The U.S.S.R. is our closest neighbor not counting Mexico and Canada, with only 2 miles of water separating Little Diomed Island from the U.S.S.R. DEAR CQ DX: Has Russia ever sent a radio amateur into space? ANSWER: Rumor has it that Yuri Gagarin, the first man in space, is a licensed amateur!

FOR SALE: Mint Kenwood TS830S HF Transceiver with cw filter & spare tubes \$625.00 Fully metered & overvoltage protected 20 amp 13.8VDC power supply \$75.00 Gent Lam 413-783-8537

### DISASTER IN MEXICO

"We will bury our dead with sadness," Mexican President Miguel de la Madrid said, "But at the same time we will renew our will to live and to cure our wounds."

The terrible earthquakes in Mexico have killed and injured thousands. Amateur radio operators around the world are trying to help. Two were featured on the local news. Art Zavarella, W1KK, was interviewed live on channel 22, WWLP news. The enormity of this disaster comes alive as you listen to the sad news coming out of Mexico. The National Traffic System is doing all that it can to move all those messages in and out.

Joe Chistolini, W1LES, was in a story on the front page of the Springfield Union. Joe was able to find out if a woman's family had survived in Mexico City. All of the phone and radio links were out, except for amateur radio.

Other stories have been in the papers about ham radio operators helping. Many thanks to all who have done yeoman duty, and to those who are just listening on the bands, instead of transmitting. The Amateur Radio Emergency Service exists to train you on how to handle this type of situation. Give Ray Burk a call today and join.

**TELECONFERENCING  
RADIO NET ON THE  
KANKPH 449.175**

**REPEATER**

**FRIDAY DEC 13TH**

**8 PM**

**WESTLINK & LOCAL  
NEWS WEEKNIGHTS  
AT 8 PM**

**ATV BEACON ON  
428.25 MHz**

Radio From Way Back When...

REMINISCENCES OF WIJWV

Preamble:

Before talking about the early days of "ham radio" and its constant growth and popularity, it might be well to chronicle events that sired the hobby.

The world first learned of the possibilities of radio when the newspapers on the morning of January 20, 1903, told of the historic achievement of Guglielmo Marconi the previous evening, when, from his experimental station atop the sand dunes of Nauset Beach on Cape Cod he successfully sent a message from President Teddy Roosevelt across the Atlantic to His Majesty Edward VII in London, England.

Marconi's original call was CC, and his station consisted of four massive towers, all wooden, and several hundred feet of wire antenna.

To commemorate the 50th anniversary of his feat, a monument was erected at the sight in 1953. Incidentally as late as 1973, parts of the tower and support cables were still visible.

To complete the Marconi story, a group of fellow hams headed by William Santelmann, Jr., in 1972 petitioned the FCC to grant them a temporary call sign to be used the week of January 19, 1973, commemorating the 70th anniversary of the original feat. They were granted the call sign WCIMAR. The group set up two mobile stations, one in a trailer and one in a tent, powered by portable generators to provide power for the gear and lights. Many domestic and foreign hams were contacted that week.

The night of January 19, 1973 at 2056 hours, GMT, the historic message was repeated at Marconi's original speed of 14 wpm. Many hams participated in copying the message and were issued QSL certificates bearing the WCIMAR call sign and signifying they were honorary Marconi Wireless Operators!

General interest was further stimulated when wireless gear and operators were installed on ocean going liners, one being the ill-fated Titanic. Ham radio got underway in earnest when the war ended and ex-navy operators decide to concoct "home-brew"

stations. They put their stations in wood sheds, unused hen houses, et cetera, and that was where the term "radio shack" originated! The whole neighborhood for several hundred yards around knew when these pioneer hams were on the air. If one left the shack door open, the crash of his spark gap or whine of his rotary gap was audible and house lights flickered.

In the early days hams chose their own call sign. I won't go into the concoction of 60 to 80 foot wooden towers with horizontal cleats so that the operators could climb to the top. Also such early items as home brew tuning coils, helixes, loose couplers, condensers, etc., can be seen in the museum maintained by the ARRL and at other clubs.

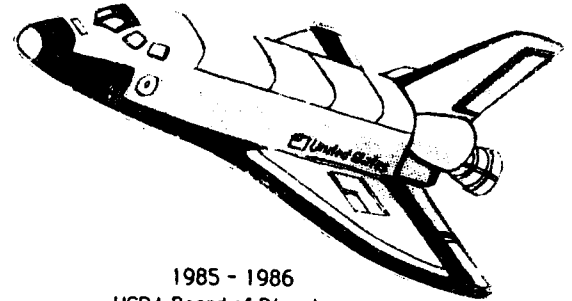
In 1924, one of our old timers, Howard Gurney, WIIC, made the Sunday newspaper when he set up antennas, receiver, and loud speakers in the Hampden church and the congregation listened to a service broadcast from a Springfield church.

In the late 1930's and 40's, 10 meters was very active because hams with home brew transmitters could contact other hams at great distances with very low power. The hurricane of '38 brought many of us into emergency operation. At the height of the storm huge trees littered the countryside, and as they crashed down they took electricity and phone lines with them! Wooden masts weren't toppled but were twisted in two as one would twist a wooden match between his fingers!

In 1940 the Signal Corps. of the U.S. Army certified some of us to be Army Amateur Radio Stations to handle traffic in our area. We held formal drills every Sunday morning, and attack on Pearl Harbor, ending our drills on 10 meters.

Following this catastrophe the government, fearing night air raids on the mainland, decreed that all cities and towns be "blacked out" after sundown. Civilian defense headquarters were speedily set up in strategic spots. Hams with mobile equipment were finger-printed, given special ID cards and formed night patrols. The upper-half of our lenses on the cars were masked, so as not to be visible from the air.

# DPOSL SPACE SHUTTLE COLUMBIA MISSION DI



1985 - 1986  
HCRA Board of Directors

After the war, ham radio took tremendous strides when surplus military radio equipment was made available. For an example, a 522 HF unit used in fighter planes was available from dealers for \$29.50, including the 24 volt generator. Cost to the government was \$1500.00 originally!

The 522 had 4 different sockets so that the operator with four different crystals had a choice of different frequencies. An amateur could easily modify this unit as an exciter on two meters. Many converted units were used in the sweepstakes competition when contests between clubs became commonplace. HCRA always placed well in such contests!

1948 saw the founding of the HCRC by a group of ardent amateurs who are listed in the club's archives. The club progressed so rapidly that in 1952 we sponsored the annual New England "hamfest", held at the Exposition grounds. Visitors from neighboring states joined in the festivities.

1954 saw hurricanes Carol, Edna, and Hazel devastate large sections of the countryside and over 1200 hams performed public service emergency duty so well that we received awards from the ARRL, and the Edison Radio Amateur Award 1954 Hurricane Citation. This latter award was highly prized because it was signed by the FCC Commissioner, the president of the ARRL, the president of the American Red Cross, and the administrator of the Federal Civil Defense.

Lightning fast progress of the last two decades in all phases of electronics such as printed circuits, miniaturization, versatility of transistors, and use of "chips" leaves one breathless! Moon bounce, amateur satellites, relay via satellites, etc are all every day events. Amateurs from the oldest veteran to the youngest novice should always be ready for the unexpected and set to do the impossible! Who can predict what's next?

All of us can cite experiences which skeptics may doubt, but verifying QSLs silence any doubters! 73 to all, and good DX or whatever may be your forte,

Howard Cutting W1JWV

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Feeding Hills MA 01030-0017  
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Work: 413-737-3562  
Amateur Extra/VE

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Work: 413-730-3253  
Amateur Extra/VE

**KA1KBN**  
Ken Grady  
274 Northwest St  
Feeding Hills MA 01030  
Home: 413-786-1756  
Work: 413-786-4767  
Advanced

K & M Electronics, Inc., a recognized electronics firm specializing in miniature high voltage power supplies, electronic components, and cable assemblies has immediate openings for individuals to work in its engineering development and production support groups.

### **Electronics Technician - Engineering**

There are currently requirements for three electronics technicians in the Engineering Development Group. An ASEE degree and a minimum of three years of related industry experience is required. A strong working knowledge of electronic fundamentals is necessary. Candidates must understand and be capable of properly using various types of electronic test equipment including oscilloscopes, DVM's, VOM's, curve tracers and power supplies, and also understand the application and use of electronic components. A background in analog circuit theory and operation including op-amps, voltage regulators, power oscillators, amplifiers, high voltage multipliers and high frequency transformers is desirable. Job responsibilities will include fabrication, testing, and troubleshooting of breadboards and Engineering prototype circuits and component testing and evaluations. The best candidate is one who is well organized in his work habits, capable of tracking parallel efforts and who can work independently on projects. Communication, documentation, and report writing skills are also important.

### **Detail Draftsperson**

Entry level to one year experience as detailer. If entry level, some technical school background in drafting would be desirable (work sample will be required). Primary responsibility will be in support of electrical design; schematics, block diagrams, flow charts with emphasis on detailing from comprehensive layouts. Some PC board taping experience would be desirable, along with willingness to grow into positions of greater responsibility (i.e. layout design, PC layout design, etc.) Position will also provide support to definition/tabulated drawings and aid to Engineering clerk as required.

Please send resume and salary requirements in confidence to:

K & M Electronics, Inc.  
221 Interstate Drive  
West Springfield MA 01089

(An equal opportunity employer)

## President's Corner

You may have heard by the time you read this that the FCC has released their thoughts on the PRB-1 matter. For those of you who don't know what PRB-1 is all about I'll take a second to elaborate.

The ARRL for years was very supportive in efforts to help hams who had problems with local and state laws which attempted to constrain or restrict Amateur Radio antenna systems. As the number of individual situations became an ever increasing number, the ARRL decided to put its neck out on the line and petition the FCC for a decision that would apply to all ham radio operators throughout the country.

PRB-1's comments to the FCC came from many sources: towns, hams, public service agencies. Not all the comments were in support of the PRB-1 concept of letting the FCC and the Federal government set the guidelines which would pre-empt any local control.

Although the FCC's decision is in support of the concept of PRB-1, it does not give ham radio operators a license to erect anything they want. Now, more than ever, all of us must undertake the responsibility to ensure that the antenna installations we have meet the specifications set forth by the manufacturer of the towers and other equipment in place.

This is one of the major accomplishments in recent times for Amateur Radio, and the ARRL. For those of you that are not believers in the League, please reconsider! The ARRL, in support of all Amateur Radio operators, took great chances in starting this PRB-1 issue. The FCC could have just returned the petition, without consideration, or even worse, could have ruled that local cities and towns do have the right to set whatever rules and restrictions that want governing Amateur Radio operators.

If you are not a League member, please consider joining or rejoining. The HCRA will be doing a massive membership drive for both the ARRL and the HCRA, in conjunction with the Club Challenge for the 80's. If you receive a mailing from us, please give it some thought and not just trash it in the can with your other junk mail.

By far the League is not perfect - you may find some faults within its organization or operation. But with the changes in the Amateur Radio service upon us, and what we foresee for the future, you may want a national organization around to ensure that the Amateur Radio service as you know it continues to exist. With your support and direction we can make the HCRA and the ARRL a dynamic team brightening the futures of Amateur Radio, both on the local and national level.

Either myself or Tom Frenaye, K1KI, the ARRL New England Division Director would be glad to speak with you regarding the HCRA or the ARRL. Tom's number is area code 203 673-5429. Best 73's and good DX de Bob KA1KPH

## TIDBITS

KAIMCA took the Western Mass section in the Novice Roundup. Shawn passed his amateur Extra class license September 22nd at age 13!!!!!! Congratulations, Shawn, we are all proud of you! ... KAIAMV is now KBIUA. ... KAIGTI, now NBIR, bought a new TM401 for use on the 449.175 machine ... September Zero Beat cost .84¢ to print. More than we can spend at the present dues level ... The KA1KPH-1 digipeater is back on the air after being blasted by lightning. Many thanks to all who helped, but especially AC1T, KD9MU, and KA1KPH ... KAIAPR is now NIDPM ... HCRA membership is now over 200! First time ever ... KA1KPH has a new TS940S ... If your Zero Beat arrives late, let us know. (If you don't renew your membership this month, don't expect it to arrive in November.) ... KAIMPA passed advanced ...

## KA1KPH-1 Digipeater

As reported in last month's Zero Beat, a considerable amount of work has gone into getting the KA1KPH-1 digipeater back on the air. Work on the new power supply was completed the weekend of 01-Sep-85. The digipeater was set up for one week burn-in at the AC1T QTH, during which time it performed flawlessly. On Saturday 07-Sep-85, John & John, AC1T and KD9MU, moved the digipeater back to the W1KK/W1NY QTH. It was replaced to the position it occupied before the fateful lightning bolt hit.

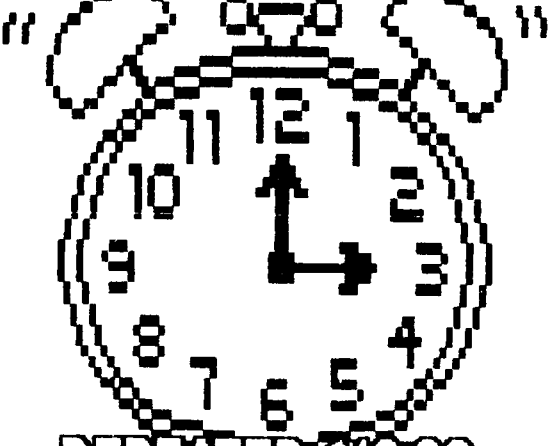
The digipeater has been providing continuous, on the air service, from Art's QTH since 07-Sep-85. Power output is 30 watts to a ringo ranger at over 90 feet, fed with 7/8 inch 50 ohm hardline. The digipeater's coverage area currently allows for direct connection with the W1AW-4 PBBS in Newington, along with access to the following digipeaters: W1AW-5 in Newington, CT; WA1IXU-0 in Wolcott, CT; KY1H-0 in Peru, MA; and WA1TLN-1 atop Mt. Ascutney, VT.

Future plans call for a move of the digipeater to its final resting place atop Wilbraham Mountain sometime soon. Look for more info here in Zero Beat and on the W1AW-4 PBBS.

**For Sale:** HEATH SB110 6 meter transceiver, 90 watts output, SSB and CW, with HP23A power supply, D104 mic, ARR P50VD receive preamp, all manuals and cables, \$220.00. Six meter beam, Hygain 66B, 6 elements \$40.00. 220 mHz beam, Cushcraft 220B, 17 elements, \$40.00. 432 mHz beam, Cushcraft 424B, 24 elements, \$40.00. Pace 1000M, SSB and AM mobile rig, 15 watts pep, covers 28.5 to 28.7 mHz, converted from 11 meters, \$100.00. John AC1T (413) 786-2438 evenings before 9 PM.

**WANTED:** Commercial communications equipment such as Motorola, RCA, and GE. VHF low band, high band, and UHF types wanted for club projects. Please reply to the HCRA, P O Box 482, West Springfield, MA 01090. All donations are tax deductible.

**TIME TO RENEW  
YOUR MEMBERSHIP!  
REGULAR \$9.00**



**REPEATER \$19.00  
NO EXTRA CHARGE  
FOR FAMILY  
MEMBERSHIPS!!!**





1985 - 1986  
HCRA Meeting Schedule

Friday	04-Oct-85	Power Distribution
Friday	01-Nov-85	Annual Auction
Friday	06-Dec-85	DX
Friday	03-Jan-86	VHF & Repeaters
Friday	07-Feb-86	Computers in TV
Friday	07-Mar-86	HF propagation
Friday	04-Apr-86	Special speaker
<u>Sunday</u>	04-May-86	Annual Flea Market
Friday	06-Jun-86	Annual June Banquet

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Springfield, MA  
Permit No. 1065

September 17 - December 10th Licensing classes  
at Agawam High, 7-9:30 pm 413-786-9115

DPØSL Spacelab Mission!

October 19th Volunteer Exam sponsored by  
HCRA in Wilbraham. 9 am 413-566-3010

WESTLINK report, every weeknight at 8 pm  
on the KALKPH repeater, 449.175 for up-  
to-the-minute amateur radio news! Soon to  
be on two meters.

ATV beacon is up and running on 426.25 mhz!  
Contact WlhGJ on the 147.105 machine.

KALJm repeater on 147.105+600 going great  
guns, with new goodies planned.

**RENEW YOUR  
MEMBERSHIP  
TODAY!**

0038

HAMPDEN COUNTY RADIO ASSOCIATION

P O BOX 482

WEST SPRINGFIELD, MA 01090

ACIT EY 10/85