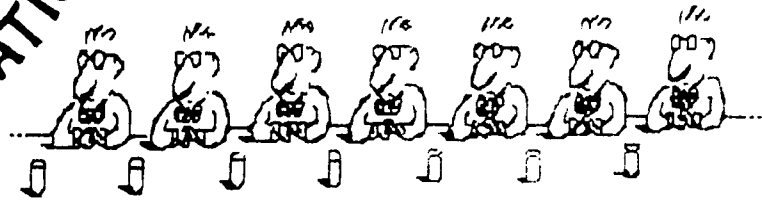


Hampden County Radio Association, Inc.  
**ZERO BEAT**  
October 1, 1992 Fall Issue



Pool of Experts

Board of Directors

1992 Club Officers 1993

1992 Directors 1993

<b>President</b>	Larry Lemoine N1EPE	WAIYCA Tryon Cote	KAITBS Fred Gore
<b>Vice President</b>	Fred Stefanik N1DPM	NR1L Kevin Hillinski	K1MVR Dave Olson
<b>Secretary</b>	Jim Sebolt N1DUY	W1ZGP Bob Leaver	KAIWER Paul Geng
<b>Treasurer</b>	Greg Stoddard N1AEH	K1QFE Bob Gutowski	N1GVB Adam Olson

**Next Scheduled Club Meeting Information !!**  
**and Editor's note**

Feeding Hills Congregational Church

Rte 57 & 187  
Feeding Hills, Ma. 01030  
Friday, October 2, 1992  
Doors open at 7:30 pm Meeting Starts 8:00 pm

Guest Speaker: Don Huntington, K1DH  
Topic: Trunking and Cellular Phones

**What's Inside . . . .**

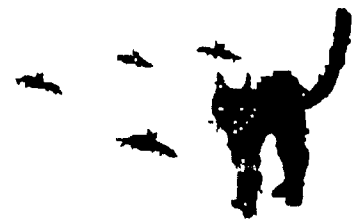
Articles from Charlie K1II, Fred N1DPM  
Information from Jim N1DUY  
Thank you from Southwick Fireman's Assn.  
President' Message

A note from your Editor:

all articles must be submitted to me by the 15th of each month no exceptions will be made. In order to get the newsletter to you on time this is necessary. Please send articles to the following address:

**Chuck Daley N1JFF**  
**560 Franklin St. Ext.**  
**Agawam, Ma. 01001**

" Happy Halloween "



## President's Message

*I want to begin by thanking John, AC1T for his excellent presentation on repeaters at our first meeting. As I expected, it was presented well, very informative and everyone in attendance left knowing a little bit more about repeaters. A great start to the new year.*

*The next club meeting is scheduled for Friday, October 2, 1992. As usual doors will open at 7:30 pm and the meeting will start at 8:00 pm. Don Huntington, K1DH will speak on Trunking and Cellular Phones. This will be an interesting presentation and I encourage all to attend.*

*Just a brief comment on November's club meeting. Plans are in place for the annual auction again. So start thinking about cleaning up your shack. More on this in next months issue.*

*The Board is attempting to survey the members at the November meeting. We're looking at ways to improve how we do things and your input is important. One question you'll be asked concerns the club's banquet and voting procedures. We're debating on possibly having the voting of club officers in May and the banquet in June. Think about it and let us know how you feel.*

*Speaking of your Board of Directors, as mentioned at the last club meeting, we had 2 positions open. One was due to a resignation and the other a promotion. At the Board meeting this month we were very pleased in the interest in filling the positions. We had more candidates than openings so voting was necessary after some discussion. I am very pleased to announce the winners and our 2 new board members:*

*K1QFE Bob Gutowski  
N1GVB Adam Olson*

*Both are enthusiastic and active in the club and we're pleased to have them serving on the board. In fact, Adam, has agreed to be the club's informal Public Relations officer. He'll be trying to make the all important announcements on the 2 meter local nets, concerning club activities during the year.*

*Every year the club actively participates and offers some big major events, such as:*

- \* January VHF contest*
- \* Flea Market*
- \* Field Day*

*It's never too early to address these events. As always we need your participation and help if we as a club are to remain strong and active.*

*Fred, N1DPM is spear heading the VHF contest and program that was started last year for club members. Dave, K1MVR has agreed to help. Now we're looking for a non-board member to help also. Fred will be addressing this at the next meeting.*

*The Spring Flea Market is so very important to all of us. In fact it's why the annual dues (\$10) are so reasonable and also why we have some money in the treasury. The club's financial strength depends on a successful flea market. We need volunteers from the membership to help form the Flea Market Committee. In the past the whole planning, etc. has always been done by a few members. For the sake of fairness and the growth of the Flea Market we're looking for volunteers now. If interested, please contact a board member by phone or at the club meeting. Just look for the white hats.*

*Field Day, what a great club event. Yes, you're right, it's nine months away, why are we mentioning it. Well that's easy, we know from experience it takes a lot of planning in advance to be successful. For now I just want to get you thinking about it. In the early part of the new year we'll be meeting to plan the June event.*

## President's Message *continued*

*I mentioned earlier in this message white hats. Those of you who attended the last meeting also saw them being worn by all Board members. We're hoping to make it obvious to all in attendance who we are. We want you as members, old or new to be able to seek help. Whether it's a question on joining the club, getting on packet, or a dipole ask us. We'll either help you or find someone who can.*

*Just a reminder, Chuck Daley, N1JJF our editor is looking for articles to include in the monthly newsletter. These could include items for sale or if you're looking for something. He needs your message by the 15th of each month.*

*Finally, I would like to thank the non-board members who attended the Board of Directors monthly meeting in September:*

WA1EYF Steve Nelson  
KA1ZE Stan Hilinski  
N1IJK Barry Morin

*Their input and participation is greatly appreciated.*

73's Larry

## For Sale Items

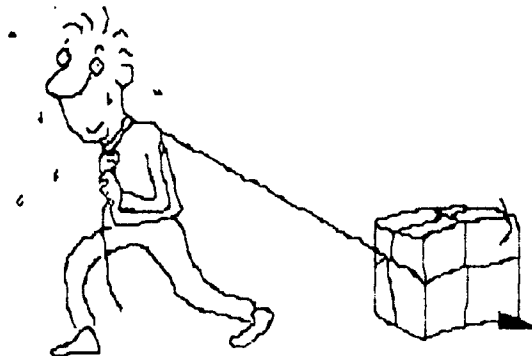
ROHN 45G Foldover 28' - good condition asking \$500 W1ZGP, Bob (203)653-0715

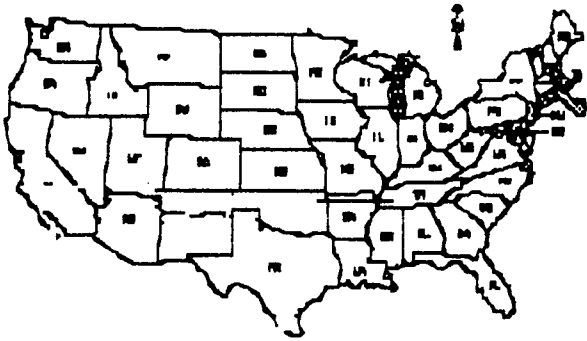
Cushcraft 10 - 3CD, 3 element 10 meter Yagi, 10 foot boom. As new condition \$100 or best offer. Contact N1MUW, John at 413-568-0844.

Cushcraft ATB - 34, Triband Yagi, 10, 15, 20 meters. Modified to 5 elements on a 24 foot boom (works great this way!!!) or as stock, 4 elements on a 18 foot boom. Includes a W2DU 1:1 Current Balun. \$150 or best offer. Contact N1DPM, Fred at 413-786-7943.

## Help is available !!!

*Anyone interested in help with readying their station for the January VHF Sweepstakes please feel free to ask. This may include Antenna/Tower work as well as technical assistance. Now's the time to do this before the weather gets bad!! contact Fred, N1DPM at 413-786-7943.*





## September Monthly Highlights

*John Balboni AC1T was heard talking in a 200 ft grain elevator in Decatur, Illinois and on the same day in Baltimore, MD where the USS Constitution was docked. For an explanation through the marvel of wireless - there was an extensive tropo ducting phenomena that AC1T was able to participate in. It was fun just listening to the excitement in his voice.*

*Fred, KA1TBS was caught by VCR spying on HCRA members' antenna configurations via helicopter portable operation on 440. His aerial 35mm photography turned out F.B.!*

*Many of our members were able to take advantage of the Great openings on 2m to Florida, Texas, St. Louis, Ohio; also 440 propagation extending up into the microwave bands during and after the September VHF contest.*

*Bob, W1ZGP is off on a new endeavor. Backhoe, blasting anchors? Night survey at your QTH? Low helicopter landing at the East Hartland fair grounds.*

*Tell us more!*

*Progression for Frank NC1P's EME 440 array - keep us posted on your progress.  
(Hardline as big as fire hose)*

*Tornado tree clean up continuing at Charlie's K1H QTH.*

*The September HCRA meeting on repeaters was well attended and an excellent presentation was given by John AC1T, with a full 440 repeater-controller, duplexer tuned cavity and test equipment. It kept the 50 plus members attention for the complete night. Overhead projections well documented the inner workings along with John's technical expertise.*

## Important Club Information

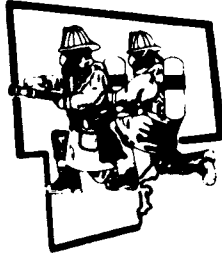
### Dues are due November 1rst

*If your mailing label shows a date of 10/92 in the upper right corner, you are due for renewal this year. Renew on time and insure that you won't miss any issues of  
ZERO BEAT!*

### The Quarter Century Wireless Association

*(QCWA) has a new Pioneer Chapter serving our local area. If it has been 25 years since your first amateur license, and you are licensed now, even with gaps of expired licenses, you are eligible to join QCWA and the local chapter. For more information please contact:*

*K1BXE Yorke Phillips  
W1ALL George Hughes*



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# Southwick Firemen's Association

P.O. BOX 532 SOUTHWICK MA 01077

PHONE 1-413-569-6363

Larry Lemoine  
Hampden County Radio Association  
West Springfield MA 01090

9/18/92

Dear Larry:

Now that the dust has settled, and the equipment is put away I would like to thank your organization for all that was done to help us with the parking arrangements for our annual carnival. Your groups ability to pull things together at the last minute, and staff such a function stands as a symbol of the commitment apparent within your group.

While your help with keeping the parking uniform, and in it's designated area required great patience. Your ability to communicate from a remote area (consolidated school) was something that had not occurred to us. As you know this proved to be a great asset by reporting the firefighter with the cut hand. Your attention to the situation allowed us to be in route immediately allowing for the best possible care for his injuries. Fellow members of his department were very appreciative for all that was done, and we would like to thank you for your help on that matter.

Once again thank you for all that you did, your staffing made our night run smoother, and help insure safety for all those in attendance through your communications. We look forward to working with you in the future, and if we can be of any assistance to your group please do not hesitate to call.

Sincerely

Russ Anderson  
Parade Marshal

## How Amateur Radio Served the Community of Southwick

Late on Friday afternoon, September 11, 1992, Fred KA1TBS received a request for volunteer communications help from the Southwick Fireman's Association Parade and Carnival committee. The parade was scheduled to start off at 6:00 pm sharp Saturday September 12. They were in need of eight radio operators for a 100 vehicle fire parade.

During the HCRA meeting KA1TBS made the request known and for the public service event he obtained the services of George W1ALL, Bob W1ZGP, Paul KA1WER, Phil K1YXX and xyl Marilyn, Yorke K1BXE, Pauline, N1EVE, Charlie K1II and of course Fred KA1TBS. Phil was able to procure an extra 2m HT with extra batteries and Len N1JTU loaned us his HT and extra Alkalines.

The event didn't go by without any excitement. While enroute for our briefing assignments, a report of a downed airplane in Southwick was reported. An ultralite lost its engine and made a forced landing with no injuries or damage. We met with fire officials at 3:30 pm and were given our assignments. Yorke, George and Phil had traffic control and parking on the south carnival school grounds. Paul, Bob, Pauline and Marilyn had traffic and parking detail at the fire station, encompassing parade embarking/disembarking, shuttle bus co-ordinating and fireman's parking. Fred co-ordinated with fire officials and helped with parade participant vehicle traffic at the fire grounds. Charlie acted as control, assisted Fred when needed, and guarded the police and fire station area.

All was going routinely well for the first two hours until twenty minutes before parade start when net control received an emergency call from K1YXX requesting the ambulance for a severe arm laceration of a parade participant. Net control was adjacent to the Southwick Ambulance EMT's on duty and able to get medical assistance dispatched immediately. Through pedestrian and vehicle congestion and with the coordination of Yorke, George and Phil, the ambulance transported the injured patient to Noble Hospital and still made its place for parade start time!

### HCRA members

K1BXE, W1ZGP, W1ALL, N1EVE, KA1WER, KA1TBS, K1YXX and K1II volunteered their Services from 3:30 pm to 8:00 pm when operations were secured. Public comment by Southwick fire officials was very positive in the efficient, professional way our club members performed for the first time during this annual town event. A member of the police department was impressed on how order and discipline was maintained with excellent signals from handhelds for eight portable amateur operators. (Amateur meaning no for pay - professional in operation)

In conclusion, the request was made on short notice, for an unfamiliar operation, during VHF contest weekend, requiring extensive HT battery reserve and need of substantial number of trained operators. This was excellent training in the event we are needed for emergency disaster communications anytime, anywhere, and also gave the Amateur Radio Service positive reflections to the public audience unaware of our training and capability. We were able to communicate on low power with brief transmissions, extending battery life and keeping our simplex frequency used efficiently without doubling or requiring repeats. We were invited for a return next year, as members representative of the HCRA.

Charlie K1II

## KEEP THAT NOISE DOWN !!

By: Fred Stefanik N1DPM

Quite a few of us are interested in weak signal work on the VHF and UHF bands. With the January VHF Sweepstakes just around the corner we're thinking (or should be) about how to improve our stations, add a new band, or perhaps, get a station on for the first time. This article is geared around the "typical" VHF station, a radio (hopefully multimode), feedline, and an antenna.

Let's concentrate on just the feedline (or as it's known "Coax") for now. Your stations performance has a lot of factors working on it some of which are, but are not limited to; antenna performance (gain and pattern, be careful of these sometimes fictitious numbers!), antenna height, your radio's receive sensitivity and transmitter power, and one of the most important your FEEDLINE. I purposely left out your station location because most of us aren't serious enough to move our homes just for Ham Radio! The feedline's job is to provide a "link" between the antenna (your stations connection to the "outside world") and your radio.

Proper choice of a feedline can make a mediocre station into a good one. Let's say your radio has what is considered to be a "HOT" front end. Its sensitivity is .1 microvolt. This equates to a receiver noise figure of 4.26dB. By todays radio standards, this is good, but by low noise preamps, it's poor! Now let's take your new radio and connect it to that old 2 meter yagi on your tower that's been up for 20 years, fed with 100 feet of RG-8 coax. When the coax was new its loss was rated at 2.6dB, but with its age let's tack on another .4dB, for a total of 3dB. Not too far from typical. Through some calculations, your system noise figure is now at 7.26dB, and a little more calculating will show that your actual receiver sensitivity has degraded to .16 microvolts or 4dB!!

Now let's take your new radio and add a "GOOD" low noise preamp (not the one that you think is good that's in your brick amplifier), at the same time we will change the coax to 9913. The noise figure of the preamp is .5dB, and the new cable loss is 1.3 dB. These simple changes will improve your system noise figure by 5.2dB!! or now it will be 2.07dB!! These simple changes result in an improved receive sensitivity of 8.5dB or in microvolts your systems sensitivity is now .06 uV!!

Not only does the feedline add noise to the receive system, and remember if you can't here them you can't work them, but it'll "eat-up" valuable transmitter power. With 10 watts into the first system, only 5 watts will reach the antenna, in the second system, 7.5 watts get to the antenna. FREE POWER!! Remember the inverse of the first law is also true; if they can't here you, you can't work them either, and the guy on the other end may have a system

number 1 type receive system.

So don't go crazy spending a lot of money on the fanciest radio that you can find, and connect it to a poor system. Improve the system and use a average radio for much better results!!

Thanks to John Sortor, KB3XG, for his article "The relationship of sensitivity and noise figure" from April 1992 Pack Rats "CHEESE BITS" newsletter.

---

TO: Fred Stefanik. N1DPM

DATE: 9/17/92

FROM: Ron Klimas. WZ1V

SUBJECT: ZERO BEAT

VHF/UHF LOG INFORMATION AUGUST - SEPTEMBER 92  
( EDIT IT AS YOU WISH )

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#### LIFE BEYOND HF IN EN31

AUGUST AND SEPTEMBER PROVIDED SEVERAL LONG HAUL TROPO AND AURORA OPENINGS ON THE VHF AND UHF BANDS. AURORA OPENINGS ON AUG 22-23 PROVIDED CW CONTACTS ON 2M AS FAR AS KW0A IN EM48 MISSOURI. THE NEXT 2 EVENINGS PROVIDED INTENSE TROPO CONTACTS ON 2M & 70CM WITH N4AVV & KMBID IN S. CAROLINA AS WELL AS WD4AFY IN GEORGIA. I WORKED THESE 3 WITH JUST 10 WATTS AND A SINGLE YAGI ON 432. AC1T/R HAD CHECK-INS FROM MOBILES IN NORTH CAROLINA THE FOLLOWING MORNING.

AN AURORA OPENING ON SEPT 4 PRODUCED 2M CW CONTACTS AS FAR AS WROG IN EN31 DES MOINES, IOWA. 4 MAJOR FLARES ON THE SUN SEPT 6 & 7 CAUSED INTENSE AURORAS SEPT 9 - 11, WITH MANY 8'S & 9'S RST 599. THE EVENING OF SEPTEMBER 13 PROVIDED A WIDESPREAD TROPO OPENING FOR THE CONTEST ON SUNDAY NIGHT. I WAS WORKING DOZENS OF 8'S, 9'S, AND 0'S ON 2M AND 70CM. WHILE STATIONS TO MY NORTH AND EAST (LIKE W1RIL) WERE ALSO WORKING DOWN INTO FLORIDA. I UNDERSTAND W2SZ/1 ON MOUNT GREYLOCK WORKED FLORIDA ON 1296 MHZ THAT NIGHT ! WE'RE SURE TO SEE RECORD BREAKING SCORES THIS YEAR.

AS OF SEPT 17, I STILL HAVE NOT HEARD THE END OF THIS TROPO. I UNDERSTAND AC1T/R PICKED UP A STATION IN ILLINOIS ON SEPT 14. I PICKED UP MICHIGAN ON 903 MHZ THAT EVENING RUNNING JUST 2 WATTS FROM HERE. SEPT 16 TROPO PRODUCED 2M CONTACTS AS FAR AS AB4JI IN ALABAMA. I WONDER WHAT'S IN STORE NEXT ?

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**Hampden County Radio Association, Inc.**  
**P.O. Box 482**  
**West Springfield, Ma. 01090-0482**

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