



# SIGNAL



de NINC

January 2014 Volume 23 Number 1

## This Month's Meeting

### This Month's Program

January brings Short Subjects Night! If you've got an interest, a war story, a statistic, a technical explanation, or anything else ham related that you could discuss in 5-15 minutes come along and step up to the front. We'll even let the shy folks speak from the back of the room. We'll have the usual projection and audio support available. Coffee will be supplied to "lubricate" whatever Elmer conversations might arise.

A couple of members have already said they just might have a topic. But a speaking agenda hasn't been formalized—this is truly an ad hoc meeting. There is a hint, though, that one topic will be a presentation of a nationally-recognized game show with audience participation.

As with this past December meeting, we didn't go through a lot of hoops soliciting inputs. Frankly, this loose management technique has been a bit of an experiment to see who would step up. In the December Home Brew Night announcement we commented that each year we are blown away with the breadth of interests and skills among our members. It comes from having a full-service, multi-interest club.

This months meeting is January 16th at the Pepperell Community Center at 7:30 PM. The Community Center is on the Northwest corner of the Route 111/113 rotary in Pepperell. Access is from Route 111 going north from the rotary.

## Last Month's Meeting

Skip went over upcoming meeting programs and club activities. Then after introductions we broke for refreshments. After the break a Yankee Swap took place with about 20 members participating. This

was followed by the main program which was Homebrew Night.



Above Skip K1NKR starts off the December meeting. Photo courtesy KD1SM



Dennis K1LGQ explained the antenna launcher he built. The unit disassembles to about one half-length for transportation. It will launch a line over 100 feet high. Photo courtesy KD1SM



Bob W1XP showed the homebrew transmitter/receiver he designed for the Lantern Battery Challenge. Photo courtesy KD1SM



Stan KD1LE displayed the audio switch he built for switching sound card audio between two computers. It is an adaptation/reuse of a KVM switch and video cables. Photo courtesy KD1SM



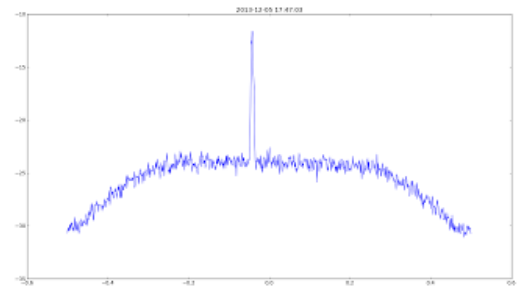
Dan KW2T showed a CW Paddle he designed and built. Photo courtesy KD1SM



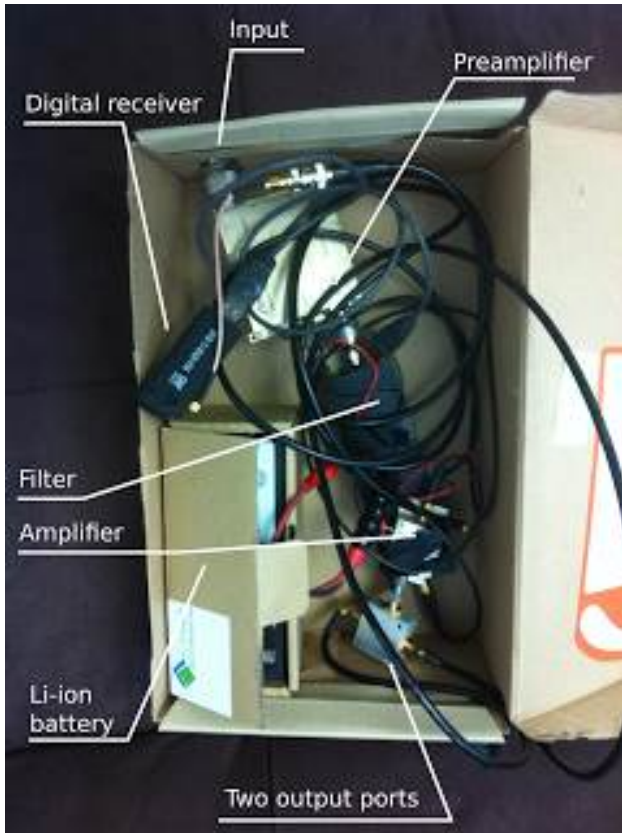
Rod displayed the keying relay he assembled for low voltage control of old transmitter's that have high voltage keying circuits. Photo courtesy KD1SM

After Homebrew Night our guest Philip Erickson from MIT Haystack spoke about a recent interference problem they had. The below signal was in the middle of a government frequency allocation they use for research.

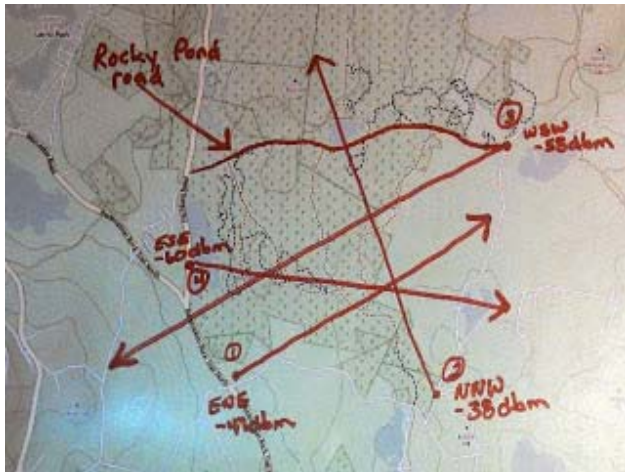
The following pictures are from <http://kaira.sgo.fi/2013/12/perfect-incoherent-scatter-radar-jammer.html> which Philip used for the presentation.



The interfering signal



The quickly assembled “fox hunting” equipment based on a laptop with an SDR dongle with associated amplifier, filter, and power source



Using both omni-directional and Arrow Yagi type antennas and traditional direction finding techniques they plotted signal strengths and directions until they found the offending transmitter in the Leominster area.

December meeting attendees

John K1JEB, Dennis K1LGQ, Leo K1LK, Skip K1NKR, George KB1HFT, Stan KD1LE, Ralph KD1SM, John KK1X, Dan KW2T, Les N1SV, Ed N1YFK, Peter N1ZRG, Jim N8VIM, Larry W1ESR, Bob W1XP, Rod WA1TAC  
 Guests: Steve WA1SLX, Phil Erickson

**President’s Corner**

de Skip, K1NKR

Full disclosure. I did a final audit on the 2013 New Year’s resolutions that I noted last month. Zero for five. No more resolutions for me. Not only weren’t they an incentive, they were an embarrassment!

I do have some winter projects, though.

I’ve made at least one QSO per day for 2014. So far, that is. I’m not sure I can keep up such an aggressive operating schedule, even if I average things out to make up for the days I’m sure to miss.

The power switch on the FT-736R that had died some years ago and was “temporarily” fixed with a junk part dangling from a hole in the front panel has been replaced. The rig remains on the shop bench to see if the 440 MHz PLL problem is real or imagined.

The SteppIR needs to be re-interfaced to the Flex-5000. It’s conceptually easy but there is a software setup involved so success may be a random process. You know how software is.

Maybe a 60m dipole needs to be added to the 80/40 one. And maybe a couple of traps and some wire extensions so that 160m is a possibility. Hmmm. I’ve been told that there’s more “agony gain” if an antenna is put up in bad weather. Given how things are going this winter this promises to be a 10dB dipole.

Prototype number 1 of the multi-band remotely controlled bypass switch and VHF/UHF preamp combo was a dismal 2012/2013 failure. Success awaits an Elmer who can walk me through strip-line design.

The circa-1962 5-element 6m Cushcraft beam got properly installed above the SteppIR (which also covers 6) before the end of last Fall. Trouble is, there’s about 4.5dB of outgoing feedline loss and the same amount of resulting increase in receiver noise figure. Replacing the relay in that old Mirage A1015 amplifier, buying a power supply, and installing both



out in the garden shed would really solve that problem.

I've promised myself that each of the four microwave transverters would be outfitted with T/R sequencing relays. And the FT-817 that I use for an IF is going to be modded so that I can plug in one of those DVT-B dongles as a spectrum scope. That promises to occupy some warm and inviting bench time.

Speaking of DVT-B dongles, have you noticed that all of a sudden they're the "hot" thing in the club? At least four members are experimenting with them as station accessories. (And those four are not the usual complement of techno-geeks.) Sounds like a good subject for a meeting's entertainment, or for an Elmering session at one of KW2T's Tech Nights.

So, no New Year's resolutions for 2014. Just a winter "do-fer" list. Whatever doesn't get done will just roll over to Spring, then to Summer, then to Fall, then to 2015. It's a hobby, after all.

### **NVARC Club Net**

The NVARC Club Net meet's every Monday evening at 8 PM on the 442.900 Peppereil repeater.

The net is in need of a regular Net Control Station (NCS).

Participants talked about Winter preparations antenna work, antenna switches. Also, various SDR dongle projects by members for aircraft radar, signal analysis and interference identification.

Recent attendees were

Jim N8VIM, Stan KD1LE, Skip K1NKR, Larry W1ESR, Les N1SV, Bruce K1BG

### **December Treasurers Report**

Income for December was \$30 in membership renewals and \$20 from PowerPole connector sales. Expenses were \$18.40 for newsletter postage and \$98.28 for batteries for the Lantern Battery Challenge, month leaving a net expense for December of \$66.68.

We received a donation from the Squannacook River Runners in appreciation of our participation in the Groton Road Race. As has been our practice for such donations this \$250 donation has been put into the Community Fund.

Current balances:

General fund	\$2,608.15
Community fund	\$4,836.41

As of 9 January we have 47 members who are current with their dues and 25 renewals outstanding. Please check your renewal status on the roster circulated at the monthly meeting or ask Ralph.

If you are joining ARRL or renewing your membership please consider letting Ralph send in the paperwork for you. The Club will buy the stamp and will get a commission from ARRL. ARRL membership checks should be made payable to NVARC; Ralph deducts the Club commission before forwarding your paperwork to Newington. As an Special Service Club, the ARRL expects a majority of Club members to also be ARRL members.

Ralph KD1SM

### **Tech Night Comment**

Dan, KW2T, and Bob, W1XP, hosted the first of what we hope are a number of "Tech Nights" in December. Tech Night is NOT an alternate club meeting. We certainly wouldn't want to split the club in two! Think of it more like the Monday night net or the Saturday breakfasts at Tiny's: some do, some don't. The real magic of Tech Night is that they are a Tproject that doesn't work, bring it in and get help. If you've got one that works and others are having problems with their versions of the same thing, bring it in and help others. Hey, just drop in and schmooze.

We're a full-service club. DXing and experimenting, ragchewing and public service, QRP and QRO. Everybody doesn't have to do everything. But there are a lot of overlapping something's to keep interest at a high level. That's actually what has made us strong for the past twenty-plus years.

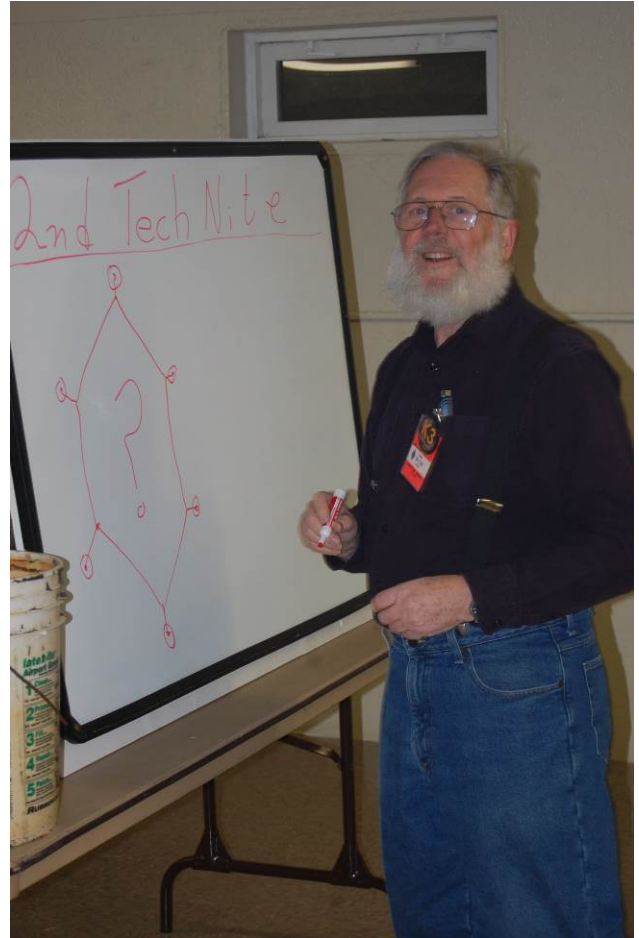
Tech Night photos courtesy Skip K1NKR



K1JEB explains to W1XP



KW2T and W1JHR test 24 GHz filter



Bob W1XP talks power divider

### January Board Meeting Notes

January 9, 2014

Board meeting

Skip, Dan, Jim, Rod, John, Stan, Bob, Ralph in attendance

Go over upcoming events, library additions to web site

Upcoming contests - do we want to go for club scores?

Skip had nothing much to report from Regional ARRL cabinet meeting

Discussion of WRTC logistics

Feb - Dan KW2T on spy radios

Mar - Dale AF1T on transmission lines

Apr - Dennis W1UE on RTTY for newbies

K1PLH Peter - Arduino WA1HCO Jeff - Arduino

Discussion of Tech Night v. Meeting night - might Tech Night rob

interesting stuff from Meeting nights? Is it a concern?

Query about 6x1 switches for Field Day. Stan might be kitting up for a run if anybody is interested.

Some question about interference in Harvard?  
Treasurer's report  
Nominating committee

John Griswold KK1X

### **Meeting Coffee "Bar"**

Many thanks to Ed Snapp, N1YFK, for his rejuvenating the coffee "bar" at the last two meetings. There's been an incremental increase in socializing, and that's what we meet for.

Don't forget to leave a donation if you partake.

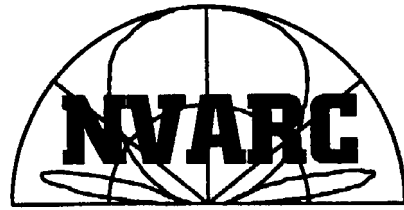
### **NVARC Swap Shoppe**

Thinking toward spring I will resume work on my antenna grounding panels. I am in need of pl-259 connectors to cover and protect unused feed thru's on the panels. If you have any old pl-259 connectors on or off cables that you don't want I could use them. They don't need to be silver plated with Teflon inserts for my application.

Thanks Stan KD1LE

### **Your Article**

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**Nashoba Valley  
Amateur Radio Club**

PO Box # 900  
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<http://www.n1nc.org/>

President: Skip Youngberg K1NKR

Vice President: Jim Hein N8VIM

Secretary: John Griswold KK1X

Treasurer: Ralph Swick KD1SM

Board Members:

Dan Pedtke 2011-2014

Rod Hersh WA1TAC 2012-2015

Bob Reif: W1XP 2013-2016

Editor: Stan Pozerski KD1LE

Emergency Coordinator: Larry Swezey W1ESR

Photographer: Ralph Swick KD1SM

PIO: Roland Guilmet NR1G

Librarian: Peter Nordberg N1ZRG

Property Master: John Griswold KK1X

N1NC Trustee: Bruce Blain K1BG

Annual membership dues are \$15; \$20 for a family

Meetings are held on the 3rd Thursday of the month

7:30 p.m. - Pepperell Community Ctr.

Talk-in 146.490 simplex

442.900 + 100Hz Repeater battery power

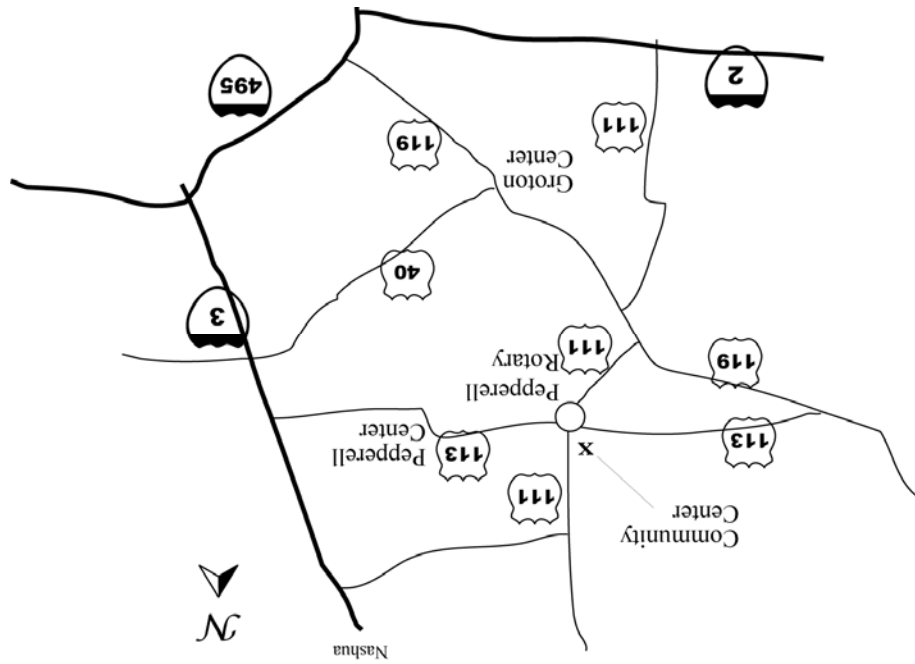
147.345 + 100 Hz Repeater

53.890 – 100Hz Repeater battery power

This newsletter is published monthly. Submissions,  
corrections and inquiries should be directed to the

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