

# SIGNAL



de NINC

April 2012 Volume 21 Number 4

## This Month's Meeting

The next regular meeting will be Thursday April 19<sup>th</sup> at 7:30 and will be held at the Pepperell Community Center.

The meeting program is How Antennas Work by Dale Clement AF1T.

We will hold elections at this month's meeting. Contact Bob W1XP if you are interested in running for an office.

This month we also celebrate NVARC's 20<sup>th</sup> anniversary. Come celebrate with us.

## From the President

This will be my last column as President since I have decided not to run in the upcoming election. I want to thank everyone who supported me and the club over the past 14 years as President and 19 years of participating in NVARC Board meeting.

Yearbook Reminder

Apply all current updates  
Check their contact information  
Update your interests

I'm also looking for some information about past club officers in particular Board members from 1992-1995 and any other appointments. I have searched the Signal archive and recovered most of the information from subsequent years.

Stan KD1LE

## Last Month's Meeting

Last month's meeting was held at the Pepperell Library. Since they were preparing for a Quilt Show

the Art Room where we held our meeting was draped with quilts of many colors and sizes.



The meeting program last month was "Measuring Inductors" by Bob W1XP. In addition Ralph KD1SM reported on a recent meeting in Sutton that had information on the future of RACES and the Massachusetts Emergency Management Agency.



Attendees: Bruce K1BG, Dennis K1LGQ, Skip K1NKR, Tom K1NNJ, Gary K1YTS, Larry KB1ESR, Ken KB1UVP, Pete KB1VPW, Chris KB1WKI, Stan KD1LE, Ralph KD1SM, John KK1X, Dan KW2T, Les N1SV, Peter N1ZRG, Jim N8VIM, John N9RE, Roland NR1G, Paul NW1U, Bob W1IS, Dick W1LTN, Rod WA1TAC, Russ WR1Y.

### **3<sup>rd</sup> Lantern Battery Challenge Ends**

The third annual Lantern Battery Challenge has ended as of the first of March. I have received a total of eight logs in a total of four entry categories. It was encouraging to receive two digital mode entries for the first time. CW did continue to dominate with four entries. Everyone is invited to the April meeting where after the presentation of the awards we will have refreshments. This is a usual Lantern Battery Challenge tradition, but this year we have a larger achievement to celebrate. That is the 20<sup>th</sup> anniversary of NVARC.

On a different note, I would like to invite comments on how we run the Lantern Battery Challenge in the future. There have been several comments about having lots of battery left. Sadly some have batteries that remain unused. I have considered two options. Changing the time period either longer or shorter, and the second is changing the power source. This would be a change to a source with less capacity. A battery made up of AA cells is one idea. This would also be a less expensive battery so the entry fee would be lower. This would probably favor more low power and simple receiver rigs. One thought I had was to reduce the activity period from October to January 2<sup>nd</sup>. For contest activity it included the CQWW phone and CW as well as the ARRL Sweepstakes phone and CW, the ARRL ten-meter contest and many others concluding with SKN on New Years day. But this is only to start the conversation so lets hear form you whether you have been in the LBC or not. 73 Bob

### **The End of Incandescent Bulbs Part 2**

In 2008 and 2009 I wrote articles for the Signal "Bye Bye Incandescent Bulbs" and "The End of Incandescent Bulbs" on the legislation that had been enacted to end the use of incandescent light bulbs to reduce energy consumption.

An article from March 14th 2012 BBC "LED bulbs: The end of the light bulb as we know it?" spurred me to look into the subject and see how far we had come compared to what was projected back then.

Incandescent light bulbs have a long history and have remained mostly unchanged since Edison invented the first practical bulb in 1878. By 1880 his Edison Lamp Works was producing 50,000 lamps a year.

The legislation and way each country or area is approaching the issue is different. Some are using an outright ban on the sale of incandescent bulbs on a schedule basis, some are progressively increasing the energy efficiency requirements on lighting, and some are undertaking country wide swap out programs. The goal in all cases is to reduce energy consumption. Currently the following major countries/areas have some program to that will cause them to be phased out. That is unless they can make them more efficient. Below are a list of some major countries and what they are doing.

EU phase out started in 2009

China phase out starting in 2012 for 100+ watts lamps and by 2016 either a total ban or a ban for over 15 watt bulbs. This is a large market for bulbs with 1,000,000,000 sold annually and could influence other areas.

Canada in 2011 legislation making import illegal starting in 2014

US early regulations were slated to go in effect in 2012 but were subsequently delayed to 2014 and were not an actual ban but an energy efficiency requirement starting with 100 watt bulbs and in following years moving down to 40 watt bulbs. The current rules just dictate that bulbs in this wattage range achieve a 35% efficiency increase by I believe 2016. It is hard to follow the legislation and how they are measuring the requirement. Additional later legislation will change the requirement so that by 2020 all general purpose lamps must achieve 45 lumens per watt which was the efficiency of the CFL lamps.

Australian program starting in 2007 with an almost complete ban by 2010.

India had no ban but a national plan to replace 400 million incandescent with CFL's by 2012

Argentina is way ahead with a ban on selling or importing since 2010

Many other countries have laws or regulations with the same or higher goals. For example, the California plan is based on increasing efficiency requirements annually starting in 2013 which would effectively eliminate them in a few years but with a ban by 2018.

The BBC article says the US has no plans to phase out all incandescent bulbs and while that is true it is only part of the story. As in most regulations there are exemptions for special purpose bulbs such as spot lights, plant lights, stage lights and others. The rules progressively apply efficiency standards to lamps starting at 100 watts or more and currently end with the requirement applying to 40 watt lamps. The reasoning here is that the lamps covered are the most common and therefore consume most of the power and secondly that at either end of the scale are specialty lamps that may be difficult to replace in the same form such as the candelabra lamps used in household hanging fixtures. When I wrote the first article these lamps were rare though a quick search of the Internet for them now shows many choices though they are more expensive at \$7 for more bulky CFL's and \$15 for equivalent LED's. The LED bulbs were \$50-100 back in 2008.

While there were originally news articles about people buying up large quantities of bulbs and hoarding them most of that has past. I think most of us have gone along quietly based on a wish to be green and for energy/cost savings. The CFL bulbs have improved in starting time, color, and lifetime. For replacement lamps of equal light output (lumens) Halogen lamps use about 75% and CFL's use about 25% of the power of an incandescent.

While we are mostly thinking about the incandescent bulb phase out it is not the complete story. The increasing efficiency requirements also affect older fluorescent lamps. T12 fluorescent bulbs are also being phased out because of the efficiency standards in favor of T8 or T5 styles which are more efficient. T12 lamps will no longer be in production effective July 14th 2012. There are two aspects at work here. Here is where I learned some new things. The newer systems use electronic ballasts in place of the electromagnetic ballasts of the T12's. The bulbs are more efficient and thinner using less raw material. The electromagnetic ballast is contributor to the inefficiencies. A comparison from the Connexiones site shows a 40 watt T12 bulb producing 1980-3300 lumens, a 32 watt T8 bulb producing 2850-3100 lumens and a 28 watt T5 bulb producing 2900 lumens. It wasn't clear why the output of the T12's is such a large range. One problem with T12 lamps is the output depreciates at twice the rate of the newer bulbs with electronic ballasts. This is a function of both the lamp and ballast.

There have been many improvements in the CFL's over just a few years. They start much faster than the early models. There are now dimmable versions though they use a different dimmer switch than

standard incandescent bulbs did. Energy Star data shows that the average bulb lifetime has increased from 6500 hours in 1999 to over 9000 hours recently. Also over the same period the efficiency as measured in lumens per watt has increased from 56 to over 61 lumens per watt all while the prices have dropped dramatically. They have reduced the flickering common in the early models. They have also reduced the amount of mercury by about 75% as a requirement for Energy Star qualified bulbs. An early objection was the color of the light. CFL'S are now available in "warm white" and "soft white" that are similar to the light of an incandescent bulb. They also come in "daylight", "bright white" and "sunlight" which have higher color temperatures.

Did you know what the "T#" in the bulb specification means? It usually is the diameter of the tube in eighths of an inch. The T12 lamp is 12 X 1/8 inch or 1-1/2 inches. The T5 lamp is about 5/8th of an inch in diameter.

#### Fun Facts

Edison's first two children were;  
 Marion Edison nicknamed Dot  
 Thomas Edison Jr. nicknamed Dash  
 (From IEEE Website and Wikipedia on Thomas A Edison)

#### Sources

BBC  
 Wikipedia on regulations and types of bulbs  
 California Website ([www.energy.ca.gov/lightbulbs](http://www.energy.ca.gov/lightbulbs)  
<http://www.connexiones.com/t12-phase-out>  
[http://www.seattle.gov/light/conserves/resident/cv5\\_lw2.htm](http://www.seattle.gov/light/conserves/resident/cv5_lw2.htm)  
 and others

Stan KD1LE

### Birds and Wind Turbines

The subject or comments come up from time to time about wind turbines killing birds. So the following table may be illuminating to some.

#### Bird kills by cats and human activity annually

|                      |                  |
|----------------------|------------------|
| Cats                 | 100-1000 million |
| Houses/windows       | 100-900 million  |
| Transmission Lines   | 174 million      |
| Hunting              | 100+ million     |
| Agriculture          | 67 million       |
| Automobiles          | 57 million       |
| Communication Towers | 4-10 million     |
| Oil/Gas Extraction   | 1-2 million      |

Wind Turbines 10-40,000

While there is a considerable range in some of the numbers it is clear from the numbers that we should eliminate all the cats and windows if we want to reduce the bird fatalities significantly.

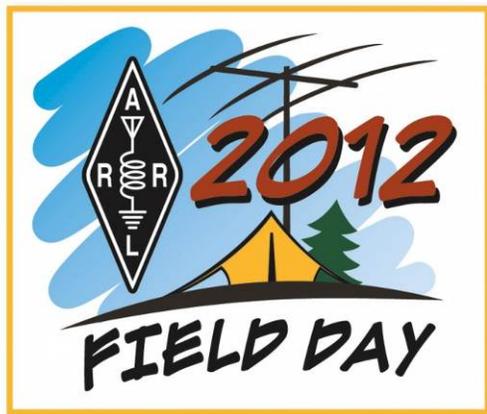
By my quick calculations that would reduce bird deaths by 89.7%. That is opposed to the 0.0017% that would be saved by eliminating wind turbines.

A different way of comparing bird deaths is that there are 0.3-0.4 wildlife fatalities/GWH of electricity produced by wind power and 5.2 fatalities/GWHR of electricity produced by fossil fuels.

Stan KD1LE

**Field Day**

**NVARC Field Day 2012**



**www.arrl.org**

Date: Sat. June 23, to Sun. June 24

Location: Heald Street Orchard  
Pepperell, MA  
Lat, Long: 42.67, -71.6275  
Entrance : 42.6715, -71.6282  
Operating: 2 Alpha w/ VHF/UHF/Satellite and GOTA stations.

Calling all NVARC members and your Ham Radio friends. Join us at this year's annual Field Day operating event. This is an opportunity to operate with your fellow Hams in a non-threatening environment. As always there are many opportunities to operate.



Photo Courtesy Roland, NR1G

This year we are currently organized as follows:

Field Day Chairman:  
Roland, NR1G

Station Captains:  
CW: Bob, W1XP  
Phone: Les, N1SV  
VHF/UHF/Satellite: Skip, K1NKR  
GOTA: Bruce, K1BG

Site Coordination Captain:  
Stan, KD1LE

Infrastructure Captains:  
Power, Networking, and Electrical Safety: Jim, N8VIM  
N1MM Station Logging: Bruce, K1BG

Meals:  
Saturday Lunch: *Open Position*  
Saturday Night BBQ: Leo, K1LK  
Sunday Breakfast: *Open Position*

Bonus Point Responsibilities:  
Educational Activity: *Open Position*  
Message Section Mgr: *Open Position*  
Message Handling: *Open Position*  
W1AW Bulletin: Stan KD1LE

Alternate Power: Jim, N8VIM  
Information Table: Roland, NR1G

You can contact the Field Day Captains or me if you are interested in helping out with setup, planning, operation, food, bonus points, or takedown.



Photo Courtesy John, KK1X

Links:

<http://www.arrl.org/field-day>  
[http://en.wikipedia.org/wiki/Field\\_Day\\_\(amateur\\_radio\)](http://en.wikipedia.org/wiki/Field_Day_(amateur_radio))

Any questions, comments or suggestions are appreciated and should be sent directly to me.

73, Roland, NR1G

### NVARC Net

The NVARC net meets on 442.900 N1MNX repeater Mondays at 8:00 PM. The net is for sharing information and asking questions.

Bring your questions and topics for discussion so that we can all learn something.

Recent discussions have been antenna work, operating JT65, and helping others get on the air.

Recent Check in's;

N8VIM Jim NCS, K1NKR Skip, N1MNX Dave, KD1LE Stan, NW1U Paul, KB1HFT George, NR1G, Roland, W1LTN Dick, K1YTS Gary, KB1ESR Larry W1XP Bob, K1BG Bruce.

### PSLIST

See [www.n1nc.org/Events](http://www.n1nc.org/Events) for the latest information

### Board Meeting

The Board meeting was held April 5th.

Skip reported that Dale Clement AF1T would be the speaker for this month's meeting.

Roland will print club brochures.

Bob reported on LBC. Has made the final review of logs submitted and printed certificates. They will be awarded at the April Meeting.

Gary K1YTS reported the Townsend Canoe race would be Saturday April 14. Everything was set. River very low.

Ralph gave the Treasurers report.

Field Day is 23-24. Roland reported on Field Day preparations.

The Alzheimer's Memory Ride will be July 14th

Bruce reported receiving newsletter from Highland Lighthouse where members operated during Lighthouse Lightship Weekend. The four participants from last year unanimously voted to go back to Highland Light after considering the possibility of activating a different lighthouse this year. Bruce will follow up and contact the lighthouse.

Bruce reported Lighthouse lightship will be the 3<sup>rd</sup> full weekend in August.

Boxboro 25<sup>th</sup> – 26th

In attendance were Stan KD1LE, Bruce K1BG, Gary K1YTS, Larry KB1ESR, John KK1X, Skip K1NKR, Bob W1XP, Ralph KD1SM, Jim N8VIM and Roland NR1G.

We meet at the library once a year because of the book sale at the Community Center. They have been very flexible with us as far as access which we appreciate. They have asked us to do an informa-

tional meeting on Amateur Radio which is scheduled for April 24<sup>th</sup> at 6:30 PM. The Board proposed a donation of several specific books to the library. We have also approved a donation of \$100 to the Friends of the Lawrence Library who raise funds to support the Pepperell Library.

Since we have been holding our meetings at the Pepperell Community Center for 17 or 18 years at no cost the Board proposed a donation for tables and chairs which they are trying to replace. The Board proposes a \$500 donation. This proposal will be brought to the membership at the April meeting.

The Community Center has given us permission to put hooks in the ceiling to hang our projection screen. Arrangements will be made to get that done.

MARA card sort April 11.

The April meeting will be NVARC's 20<sup>th</sup> anniversary. Funds were approved for a cake and drinks.

Roland will make a Field Day presentation in May.

The board had approved the purchase of some additional signs to be used to direct visitors to events such as Field Day. Roland will get a price.

Bruce will include in his area emailing information to encourage area hams to visit and operate.

### Treasurers Report

Income for March was \$15 from membership dues, \$3.01 in bank interest, \$2 from ARRL membership renewals. Expenses were \$18 for newsletter postage leaving a net income for March of \$2.01.

Current balances:

|                |            |
|----------------|------------|
| General fund   | \$3,263.24 |
| Community fund | \$4,286.41 |

As of 5 April we have 35 members who are current with their dues and 30 renewals outstanding. As April is the Club's anniversary date, many of our Members have their membership anniversary date this month too. 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

### ARRL Letter

*On the Air.* FCC Seeks Public Comments on Emergency Communications by Amateur Radio and Impediments to Amateur Radio Communications

In response to the Congressional directive to prepare a study to assess Amateur Radio's role in emergency and disaster communications and the impact of private land



use regulations on the Amateur community's ability to provide such communications, the FCC issued DA 12-523 soliciting comments from the public. The period for public comment runs until May 17, 2012.

"As part of the study contained in Public Law No. 112-96, the Commission has opened a 45 day period for comments to be filed on the issue," said ARRL Regulatory Information Manager Dan Henderson, N1ND. "Because of the short deadline for the study to be completed and presented to Congress -- before the end of August -- the ARRL and the amateur community must quickly mobilize their response."

### Joe Walsh, WB6ACU, Is an Analog Man

Grammy Award winning rock-and-roll legend Joe Walsh, WB6ACU, returns with *Analog Man*, set to be released June 5. This is Walsh's first solo album since 1992's *Songs for a Dying Planet*. According to Walsh's website, *Analog Man* is both modern and timelessly soulful, packed with Walsh's wit, charm and chops; it delivers an incredibly raw and intimate sound. "It's been

20 years and I have a lot to say," Walsh explained. "These songs [on *Analog Man*] come from the heart." No stranger to the analog way of life, Walsh -- an ARRL Life Member --



Joe Walsh, WB6ACU, will release a new album -- *Analog Man* -- on June 5. Listen to the title track [here](#).

enjoys operating on 75 meters AM. AM -- or amplitude modulation -- has been around the amateur bands since the 1930s. Its advocates say that AM offers a warm, rich audio quality that provides for more personal interaction and that AM's simplicity circuit design encourages hands-on restoration, modification and homebrew construction to an extent no longer found among contemporary radios. Many hams who operate AM say they enjoy the simple, roomy electrical and mechanical designs of the older radios, claiming that they can more easily be modified and tinkered with than their modern counterparts. Other enthusiasts claim that these vintage radios sound better than their silicon descendants, saying that the tube audio from vintage gear is "warmer" and more aesthetically pleasing than the audio produced by the typical modern transceiver.

### 2011 Flea Markets/Conventions

15 April MIT Flea  
 4-5 May NEAR Fest (Deerfield NH)  
 20 May MIT Flea  
 24-26 August ARRL NE Convention (Boxborough)

### Advertisements

Your advertisement could be here. Tell them you saw it in the Signal. Advertisers should contact the NVARC Treasurer for information.



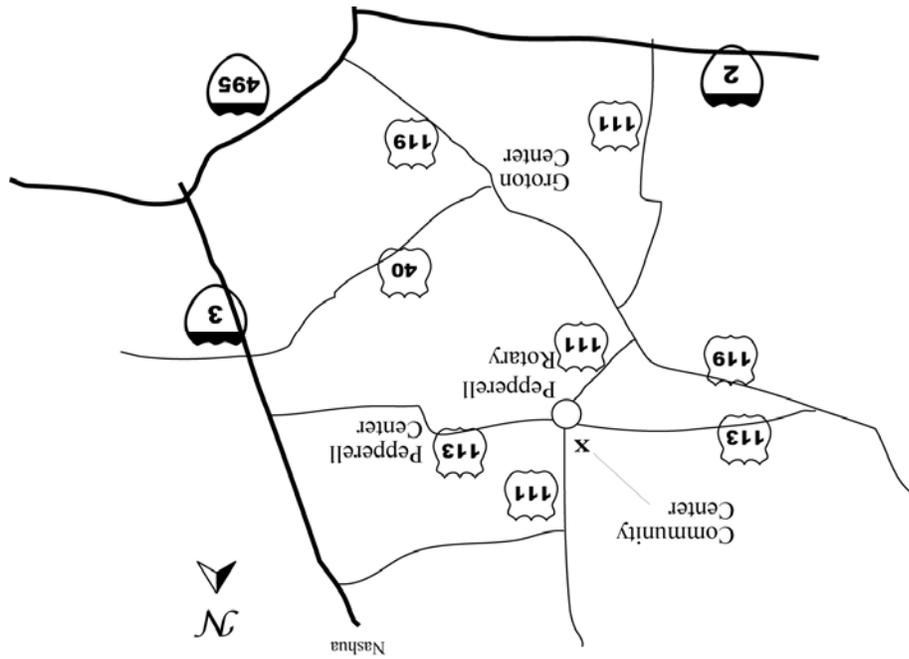
### Nashoba Valley Amateur Radio Club

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<http://www.n1nc.org/>

President: Stan Pozerski KD1LE  
 Vice President: Bruce Blain K1BG  
 Secretary: John Griswold KK1X  
 Treasurer: Ralph Swick KD1SM  
 Board Members:  
 Joel Magid W1JMM 2009-2012  
 Bob Reif: W1XP 2010-2013  
 Skip Youngberg K1NKR 2011-2014

Editor: Stan Pozerski KD1LE  
 Emergency Coordinator: Larry Swezey KB1ESR  
 Photographer: Ralph Swick KD1SM  
 PIO: Dave Peabody N1MNX  
 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 newsletter editor. Articles and graphics in most IBM-PC formats are OK.  
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