



# SIGNAL



de N1NC

April 2015 Volume 24 Number 4

## This Month's Program

For the record, this is de K1NKR.

As a short subject, Jesse Shulins, KB1YNK, is visiting to preview the talk he's giving at the Dayton Hamvention.

The main program subject will be a Jeopardy-style contest. How much do you know about Amateur Radio licensing? Bragging rights will go to the top scorer of three member-contestants. We'll need an objective scorekeeper and a not-so-objective referee.

We'll also have elections, a surprise event, and the closeout of this year's Lantern Battery Challenge (complete with the usual awards, and cake).

## President's Corner

### Parting Shots de K1NKR.

Well, folks, it's been a good run. Firmly believing in term limits, I guaranteed that this would be my final year as NVARC president. And so it shall be.

There's a lot of talent in the club and I have great hopes that someone will pick up the banner and run for president.

It's not a tough job. Those club activities that don't automatically run themselves already have an interested member associated with them. And the Secretary and Treasurer take care of most of the business anyway. Sure, the President has to convene a Board meeting in addition to just showing up at the regular meeting, but it's not even supposed to be his job to come up with each meeting's entertainment. The Vice-President, identified by the constitution as "Activities Manager," and the Directors provide ample input during Board meetings to see that that job gets done.

At various times though, the President is the face of the club internally and externally. That runs counter to a deep-seated introversion that most of

us have, so it can be both a challenge and a reward. I must admit that there have been times when surprises happened—or expectations didn't happen—and it was the President's job to smooth things over. On the other hand, there were many, many more times of great satisfaction when I was representing the club and got very positive feedback about us.

All-in-all, it's a pretty good job and it should be passed around. NVARC is a darn good club and leading it for a while is an honor, a privilege, and a way of paying back to the hobby.

Now take note of the agenda for the April meeting and of the contents of this issue of the NVARC Signal. We're making this month a fun one. Enjoy the articles—but unless the article's by-line is from a member you recognize don't take it seriously. 'Nuff said.

## Last Month's Meeting

Doug Grant, K1DG, returned to NVARC for our March meeting. Our club was quite busy over the last three years supporting WRTC-2014. Doug showed for the first time by a WRTC official the professionally-prepared video wrap-up of the event.



NVARC members and the sites we supported showed up regularly in the production. One of the

videographers was Pepperell's very own Dave Pease, a good friend of the club.



Attendees: Jim AB1WQ, Bill AB1XB, Bruce K1BG, Doug K1DG, John K1JEB, Dennis K1LGQ, Skip K1NKR, Bill K1NS, Peter K1LPH, Ken KB1UVP, Greg KB1WAQ, Stan KD1LE, Ralph KD1SM, John KK1X, Dan KW2T, Les N1SV, Jim N8VIM, Peter N1ZRG, Paul NW1U, George W1JXR, Bob W1XP, Chuck WA1RCH, Rod WA1TAC, Gene WW4EN

## Be Sure You Are Selective in Your Purchase

de Mark Space, M0DE

Have you ever considered that when you buy a new rig might have an effect on how it fits into your shack and operating interests?

What is the astrological background of your rig. When was it designed, built, purchased? All these factors have more influence than you might realize.

Now, how old a rig is certainly affects what technology it represents and what features it might have. Designs from the Chinese year of the Rooster (1993, 2005, 2017) are best for DXers while rigs designed in the year of the Sheep (1991, 2003, 2015) are best for ragchewers. Contesters have it easy. The years of the Tiger (1986, 1998, 2010, the Dragon (1988, 2000, 2012), and the Snake (1989, 2001, 2013) all support their activities. Studiously avoid Capricorn, the Goat; that's for folks who can't get their LBC rules straight. (Don't forget to line up the year's start with the start of the Chinese New Year.

It's like keeping track of day-dates in UTC versus your local time zone.

If you don't want to follow this too closely, don't worry. The year of the Pig (1995, 2007, 2019) is always best for Radio Amateurs in general.

Remember the old adage that you should never buy a car built on a Friday or a Monday? It has to do with the belief that production people might be either looking forward to or recovering from a beer-soaked weekend. Well, there is a cyclic nature to radio production. Rigs built in the month of Taurus, the Bull, are best for DXers. Similarly, Aries, the Ram is for the contesters; Cancer, the Crab, is for the nay-sayers among us; and Virgo, the Maiden, is for the YLs and XYLs. Much as with the Chinese New Year, the exact starting dates of the zodiacal month vary. Consult your Old Farmer's Almanac.

And don't forget Gemini, the Twins. Think about buying Drake equipment for your boatanchor collection in this month.

It's obvious that equipment purchased under the sign of the Christmas holiday always brings most satisfaction to the user

Now you know. Be aware of the timing any purchase. Really avoid a rig designed, built, and purchased in the year of the Monkey (1992, 2004, 2016) under the sign of Pisces, the Fish.

## Emergency Management in Need of Volunteers

Formally known as R.A.C.E.S the new acronym is A.C.S. (Amateur Communication Service) is a part of Emergency Management formally known as (Civil Defense)

The ERU ( Emergency Response Unit ) is in need of volunteers who would like to be appointed by the town, to fill needed positions such as **Communications** including **Ham, CB, FRS, GMRS & computer networking**. Also needed are volunteers able to use and maintain **generators, Lighting, water pumps and Shelter managers** etc. Please contact me before May 1<sup>st</sup> to allow time for me to get you appointed. It does not consume a lot of your time but when emergency strikes your help and expertise is appreciated. Also those who are not Pepperell residents please contact me and I will put you in touch with your community's E.M. Director. For Pepperell See web links below

[Pepperell E. M. Communications Officer](#)

<http://town.pepperell.ma.us/385/Emergency-Management-Agency>

**[E.M.A. Emergency Response Unit](http://town.pepperell.ma.us/386/Emergency-Response-Unit)**

<http://town.pepperell.ma.us/386/Emergency-Response-Unit>

Please email me if you have any interest, questions or know some one who would like to join!

**David Peabody N1MNX phone (H) 978-433-2577**  
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or [dkpeabody@gmail.com](mailto:dkpeabody@gmail.com)  
**David Peabody / N1MNX**

**To Stan, KD1LE, Editor NVARC  
Signal**

Dear Mister Stan,

First of all let me introduce myself. My call is KN1UT and I live in the back woods of Maine. Since we live so far from what some would call civilization, there is not a local radio club in the area. Some years ago on a long winter night when the bands were dead, I found your web page, N1NC.org. I have been a devoted follower of your great club ever since. My wife and our family live out here in the woods on a beautiful lake. We are not exactly off the grid, but we enjoy our somewhat simple life. I have been a ham for quite a while, and for the last few years have been concentrating on working DX on the lower bands. I'll admit that I am not much of a technician. I just don't seem to understand the technical stuff very much. I am good with my hands and I like trying new things. That is why I am writing to tell you about my latest discovery on how to build a really simple but world beater DX antenna for 160 meters.

It all began last winter when my brother in law invited me to go bear hunting with him and a bunch of his friends. I was very pleased to be invited. But my wife, bless her, said it was only because her lazy brother wanted someone to help carry all his gear. Well she may have been right, because I never got to do any hunting. But the trip led to one very important discovery. One of the members of the group had rented a hunting cabin up on the Canadian border. That was to be the base camp for the hunt. There were five of us. My brother in law, James, who everybody calls Jimbo, and three of his friends. Jimbo and I were going to meet the others at the cabin. Jimbo suggested I drive my truck because it got better gas mileage than his car. Plus there would be more room to haul the gear and bears

back. So we arrived at the cabin just in time for me to cook dinner for everybody. It seems like it is tradition for the new guy to be the camp cook till someone decides they can do a better job. So I cooked up a big pot of Moose Chile and everybody washed it down with beer. Lucky for me that Jimbo suggested we pick up the beer on the drive up. It seems that everyone is supposed to spend the night before the big hunt playing cards. I'll admit I am not very familiar with card playing, but the rules in that part of Maine sure seem strange. Like "threes are wild before 8 o'clock". Anyway Jimbo suggested I should quit before I lost the gas money for the trip home. So I really didn't have much to do. I commented I wished I had brought my ham radio. There was a great tree in front of the cabin I thought a wire into would work great on 80 meters. Well Sam, the guy that had rented the cabin, said the farther of the cabin owner had been a ham, and he had left a couple of boxes of old radio magazines in the storage room. He suggested I might like to look through them while they got down to the serious card playing. But first make some coffee and put some wood in the stove. Being the new guy has its down sides.

Well after making the coffee and bringing in enough firewood for the night I found the boxes of magazines. Unfortunately so had the mice. Anyway there didn't seem to be any mice at home at the moment. It turns out the magazines were really old. They went back to the 40's and 50's. There were a lot of QSTs, CQs and some other magazines I never heard of like Radio. So I spent a few hours thumbing through these old magazines. Mainly looking at the old gear and marveling at the low prices. At least what seemed like low prices. Then in an old CQ magazine I found an article by some fellow by the funny name of Scratchi. [See foot note] Now it seems this Mr. Scratchi fella was a good friend of the Editor of CQ and would often write him letters filling the editor in on his latest accomplishments in ham radio. It seems this Mr. Scratchi was a pretty smart fella. In this particular letter he was explaining how he has discovered a way to have a very high antenna without a tall tower. It seems that Mrs. Scratchi was like my wife and didn't really like a tall tower around the house. I've never really understood, my dear wife on this issue. We live in the middle of the woods with not a neighbor is sight and she still doesn't like big tall towers. I guess it's a woman thing. She did let me put up a single tower at the edge of the clearing I've hacked out of the woods on the shore of the lake. I've got a tribander on it, a couple of inverted V's and my inverted L for 160 meters. I've got plenty of room for my dream antenna, a 4 square for 160. But she says no. Too many towers blocking her view of the woods. Now I'm pretty smart about some things, and I know that

going along with her wishes on this is a pretty smart decision. So back to Mr. Scratchi and his letter to the editor of CQ. It seems Mr. Scratchi knows lots of antenna stuff. And one of the things he remembers is something about the image antenna. It seem, Mr. Stan, that this so called image antenna is a second imaginary antenna that is under the ground below any antenna that is over the ground. In fact this here image antenna is as far below the ground as the real antenna is above the ground. Most of us don't even know it's there. But this here Mr. Scratchi being a very clever fellow, realized that he could solve the objections of his good wife to high antennas by the simple means of digging a hole and burying the antenna. He figured all he had to do was dig a hole and throw in the antenna and fill it in. The coax just came out of the ground and he could run it to the shack. A thirty foot hole with the image antenna in it would put the "in air" antenna at 30 feet and a 50 foot hole would put the antenna at 50 foot. This is great science. I'm not sure I understand the fine points of all this but it sounds exciting to me.

Well here is where things get a little disappointing. Just as Mr. Scratchi is about to reveal how his buried antenna preformed the mice had decided to chew up the pages in the magazine. I searched through the box for maybe part of the rest of Mr. Scratchi's letter. But not a single sentence remained. So I just sat there in the store room thinking over Mr. Scratchi's letter. I tell you Mr. Stan it was so disappointing to not be able to find out how well Mr. Scratchi's image antenna scheme worked. Well by this time the card game was breaking up and Sam suggested I tend the stove and get to bed so I could be up in time to fix breakfast. Somehow this bear hunting, is seeming like less and less fun. But I'm still excited about finding the letter from Mr. Scratchi.

Mr. Stan, I don't think I'll go bear hunting again. After getting up early to tend the fire and cook a big breakfast, Sam suggested and Jimbo agreed that I looked tried. They said I should stay at the cabin and rest up so I could fix a big dinner with the fresh bear steaks. Mr. Stan, Do you know how big a job it is to clean, skin and dress a bear? At least by the third one I was getting pretty good at it. Any way the fresh bear steaks went well with the rest of the meal and last of the beer I had brought. We finished the meal off with the apple pies I had baked while doing the laundry. Anyway Sam said I could have some of the bear meat for my efforts. But being alone all day in the cabin gave me time to think over the letter from Mr. Scratchi and his image antennas. I was starting to see how I might be able to use his image antennas stuff to my advantage.

It's been months since the bear hunting trip and my wife has almost forgiven her brother. She

seemed very upset when I related my experiences on the hunting trip. She said it sounded like what she would expect of her no count brother and his group of looser friends. (I never told her about the money I lost in the card game or the five cases of beer) She did like the bear meat I brought home and all in all said it was probably a good thing I didn't go hunting as I didn't have a hunting license. But the really great thing to me was the letter of Mr. Scratchi and his image antenna. And that is why I am writing you this letter.

Mr. Stan, I don't think I am boasting at all when I say Mr. Scratchi and me are going to revolutionize ham radio antennas. Now I've spent hours and hours thinking about his image antenna theory. In fact I'm sure it is the real thing. I've thought over and over about the missing parts of the letter that the mice had use to make a nest, or ate for dinner. After all life in that cabin has to be hard for a mouse in the long northern Maine winters. But I'm convinced that the image antenna thing has to work. After all it was written up in this national magazine. So it has to be true. Just like things on the internet! So I've spent a lot of time trying to figure out how I can use Mr. Scratchi's antenna ideas to build my dream antenna, a 160 meter four square. And then it hit me. Just like a pine cone from a hundred foot pine. I could dig four holes and bury the four towers in the holes. Then I could connect to the towers where they stick out of the ground. All I need to do is dig the holes in the same pattern of the towers in the 160 meter four square. Instead of the towers sticking up in the air, they stick down into the ground. So my wife should be happy. I feed the transmitter to the image antennas in the ground and the reflected antennas above the ground do all the work. Just as Mr. Scratchi points out in his 60 year old letter to his friend the editor. Isn't science wonderful! I can't wait for mud season to be over so I can get started on this great antenna. I admit that the thought of digging four 130 foot deep holes in this Maine soil isn't appealing. Well my wife, god bless her, comes to the rescue. I am so excited about my proposed solution to my desire to have a 4 square antenna that I am telling her all about Mr. Scratchi and the buried antenna idea. Now my wife is a good hardworking loving woman, but she doesn't understand all the ins and outs of this technical radio stuff. She is saying that it doesn't sound like a buried antenna will work to her, and then she is pointing out the job of digging the holes. Then she asks "what am I going to do with all the dirt, I dig out?" Well I admit I had not thought about that. So I just say "I'll dump in in the lake." After all it's over 200 feet deep not far off the end of our pier. I remember the geology fella from the state university that was surveying the lake some years back describing how it was an especially deep lake



that was formed years ago when the ice sheet melted. So then my wife said "Well digging a hole that deep will probably just fill up with water". Now Mr. Stan, I didn't have an answer for that one. So I did what any good Maine husband does when he has just lost an argument with his wife. I go and split wood. I guess I was at least two and half cords into the pile when I took a break. I was looking at the blisters on my hands, her words "the holes will probably just fill up with water" echoing in my ears, when the second pine cone hit me. That's it. Water.

And so I'm telling you Mr. Stan, that you are friends with one very smart fella. From the discussion with my good wife, bless her again, I've come up with a great solution to my desire for a 160 meter four square antenna. Rather than put it up, I'm going to sink it. Yes your ears hear me correctly. I'm going to sink the antenna. Now my wife's comments about the water was brilliant. I secretly know it was just her way of showing me a better solution to the problem. Deep down she knew I could come up with a great improvement on Mr. Scratchi's buried antenna. I'm going to sink the four antenna towers into the lake. No digging required. Now just so you don't get too concerned I've taken care of every problem you might point out with the design. For example I'm going to wait till the lake freezes over next fall. After all that is pretty early up here in Maine. So as soon as the ice gets thick enough I'll lay out the pattern on the ice and cut four holes in the ice. Then I will lower the tower sections down into the lake as I bolt them together. Now I know you are thinking. "This will never work. The water will short out the antenna". Well I've given it a lot of thought and the answer came to me late one night while I was watching TV. (The bands were dead again.) Here was this guy on TV building a boat out of a screen door and some waterproofing stuff. Well it seemed to me if this stuff could keep water out of the boat it could keep the water out of an antenna. So I would like you to know Mr. Stan, that the fellow that sells the spray stuff has given me a very good price on four cases of the spray cans of the stuff. He said he doesn't see why it shouldn't work. He figures two coats should be adequate. So that problem solved. Now 130 feet of tower hanging down into the lake is going to weigh a lot, so I've solved that problem also. I'm collecting all the packing foam I can from the local dump. (The fancy folks in the county have a different name for the place.) I'm going to add the foam to the tower sections so they will just float so taking the antenna down (really up) before spring breakup should not be a problem. In fact I may just let the tower sections float in the lake till the next fall.

Now one more advantage this way of building an antenna has is you don't need really good tower

sections. Since there is no wind or ice load on the tower like if it were up in the air any old rusty section is usable for the towers. In fact Mr. Stan, I've been able to collect a lot of tower sections that no one would think of putting up in the air and all for free. One fella even paid me to haul off the sections he had. My wife likes the no cost approach to any of my ham radio projects.

The radial wires can just lay on the ice till spring when I can roll them up till the next fall. And all the connecting cables and direction switching box lay on the ice also. I can't wait to hear the 599 reports from the JA's on 160 next winter. This is going to change the way we look at antennas forever.

But Mr. Stan, one of the best things of all, is when the time comes to put it all together, I am going to invite my brother in law, Jimbo over for a week-end of Ice fishing. 73 KN1UT

Foot Note Hashafisti Scratchi was the subject of a humorous column in CQ magazine from 1947 to 1971 when it was dropped because it was considered politically incorrect. For over two decades Scratchi entertained the readers of the monthly column. The author was anonymous and not revealed till after the column was no longer printed. He was George Floyd, WA4DGA, who became a silent key on Nov. 22, 2008 at the age of 91. Scratchi, to my knowledge was the originator of the Image Antenna.

## April Board Meeting Notes

Treasurer's report

Two new members AB1XB & KB1ZVR

No annual report

No purge of stale members

No insurance renewal bill was ever sent - Ralph trying to negotiate giving them money

Property page updated and forwarded to Ralph

No Field Day news is good Field Day news

Girl Scout operation went well for "bedlam"

Groton Road Race is coming up April 26

Justin KJ1H willing to present in June re: Ham Radio support for Performance Rally

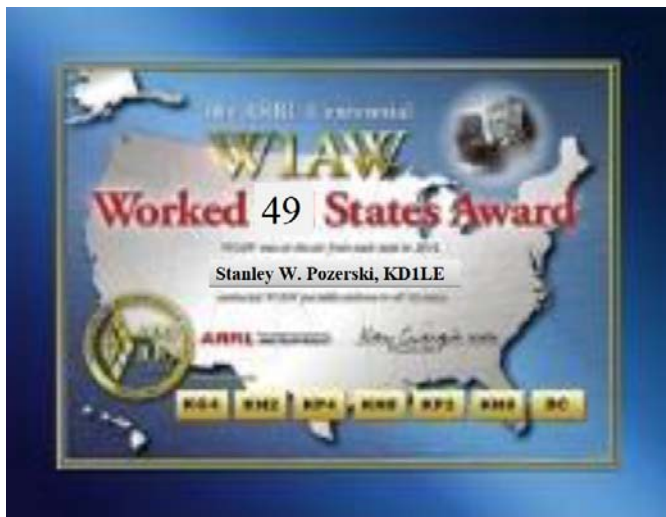
Jeopardy quiz, LBC, and Elections in April meeting

John Griswold, KK1X

## ARRL 100<sup>th</sup> Anniversary Awards

During 2014 I was very active in the ARRL anniversary portable operations. Unfortunately I got started three weeks late since I wasn't familiar with the event. Everything went well the rest of the year and I worked the W1AW/N stations each week. I often worked each state eight to ten times on various

bands and modes. Going into October I had worked each new state and made up for all but W. Virginia that I had missed at the beginning of the year. In October we went away on vacation but that wasn't a problem as I had worked the states that were coming up multiple times. Well we had a nice vacation and when we got back it took a couple of weeks to get back in the swing of things. I got back on the air and looked up what states were operating currently. To my dismay I found that W. Virginia had operated for the last time the previous week. That was very disappointing. But I looked up the event and found that I was still eligible for an award as the League is very flexible on the matter. After submitting my logs I was pleased when only a week later a large envelope came in the mail from League HQ. Enclosed was my certificate. The Worked 49 States Award.



### March Treasurers Report

Income for March was \$105 from membership dues, \$15 from ARRL membership commissions, \$4.61 in bank interest, and \$5 in PowerPole connector distributions. Expenses were \$28 for newsletter postage, \$28.98 for two Arduino kits for the meeting raffle leaving a net income for the month of \$72.63.

Current balances:

General fund	\$3,080.09
Community fund	\$4,636.41

As of 2 April we have 35 members who are current with their dues and 24 renewals outstanding. Thank you to those of you who hand in your dues before Ralph comes to you. 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

### Meeting Coffee Bar

Many thanks to Ken KB1UVP for picking up the coffee "bar" at the 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.

### Items That Anywhere Else Would Be Called Strays

Rumor has it that Elecraft is introducing a tube-type radio. It'll be called the Hollowcraft. The same rumor says that FlexRadio has a keyer coming out: The Flix. And some say that the big three Japanese Amateur Radio manufacturers are on the verge of a merger. Do you think the new company will be called KenYuComm?

Scott Paper has come out with a tubeless toilet paper roll. We're glad they're catching up. Radios have had a tubeless option for quite some time.

Most needed calls list.

- 5U4GB
- UP5KC
- K9CAT
- Q3NPN
- VY73s
- FN42gp
- LxxIII
- A41DAD
- YM4CLUB

### NVARC Club Net

The NVARC Club Net meet's every Monday evening at 8 PM on the 442.900 Pepperell repeater. Stop in and bring your input and questions. Recent nets have been run by George KB1HFT. Attendees; Stan KD1LE, Skip K1NKR, Larry W1ESR, George KB1HFT/NCS, Dan KW2T, Leo K1LK, Jim N8VIM, Bob W1XP, Peter N1ZRG.

## Upcoming Contests

2015

April

17-18 Holyland DX Contest

18 EU Spring Sprint SSB

18-19 YU DX Contest

25-26 SP DX RTTY Contest

May

ARI International DX Contest

2-3 New England QSO Party

CQ-M International DX Contest

9-10 Volta WW RTTY Contest

30-31 CQ WW WPX Contest CW

## Flea Markets/Hamfests

2015

May 1, 2 Deerfield NH NEARfest

August

21-23 ARRL New England Convention Boxboro MA

## Your Article

Your article could have been here which would have eliminated this blank space.

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## Nashoba Valley Amateur Radio Club

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Vice President: Jim Hein N8VIM

Secretary: John Griswold KK1X

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Board Members:

Rod Hersh WA1TAC 2012-2015

Bob Reif: W1XP 2013-2016

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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

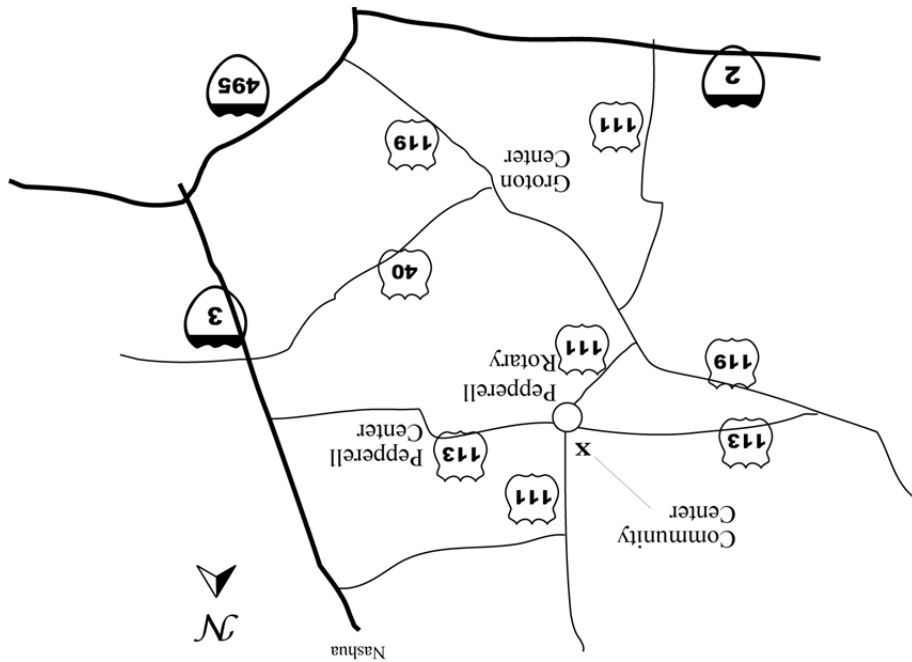
442.900 + 100Hz Repeater battery power

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53.890 - 100Hz Repeater battery power

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