



NOARS Log



February 2020

K8KRG

Volume 56, Issue 2

Table of Contents

President’s Message	1
Vice President’s Message, News	2
Social Events	3
Birthdays, Heard on the Nets, Net Controls	4
Calendar of Events	5
Member Highlight: Roger Fell, AB8IF	6
Straight Key Night New Year’s Eve and Day	8
Constitution and Bylaw Changes	9
January Meeting Minutes	10
Free Stuff	11
For Sale	12
NOARS Information	14
NOARS Winter Hamfest	15

Please review the proposed NOARS Constitution and Bylaw changes on page 9

Prez Sez

It was nice to see such a great turnout at our January membership meeting. I, personally, now know everything I need to know about DMR. I thank Gary for his excellent presentation. It is another of many options we as ham radio operators have in our communications methods especially since our normal high frequency propagation is so poor. I, again, personally prefer Yaesu System Fusion for my form of VoIP communications. I find it much simpler to setup and use. I also have been using FT-8 much more lately since it is a “real” RF method of digital communications. Of course, whenever there are two or more hams in the same room, there are disagreements on what is really ham radio communications. I belong to a few social media ham radio groups and constantly see anti-anything that is not AM mode. Since I am not an avid rag chewer, I appreciate the quick contact modes. I figure whatever satisfies your

needs and helps you enjoy the hobby, is okay. Go for it, but don’t judge others for their preferences. That is actually applicable to life itself. Have fun! Keep the bands busy so we don’t lose them.

Our next important event is our Winter Hamfest on Sunday, March 1, 2020. We already have some prepaid table reservations. If you are interested in reserving one or more tables, please let me know as soon as possible. Al, N8CX will be operating the talk-in station again. Elaine, KC8FOS will be heading up the ticket sales, but needs to have someone assist her and/or give her a break occasionally. Let me know if you might be interested in volunteering to do that. Anytime that you can offer will be appreciated. Remember, it is your organization.

Until next month, be safe and 73,
Carl W8KRF

February Program

Radio Propagation

Dave Blood, W1AFC will present about ionospheric propagation, including an interactive discussion with meeting attendees. Questions welcome!!

February Meeting

Monday, February 17, 2020

The doors will open at 6:00 PM for coffee and donuts and the meeting will start at 6:30 PM. North Ridgeville Public Library, 35700 Bainbridge Rd., North Ridgeville, OH. All are welcome to join us.

Nets

NOARS nets are Tuesday nights at 8 pm on 28.370 MHz, and Thursday nights at 8 pm on 146.700 MHz. All licensed amateurs are welcome. Participation is encouraged and appreciated.

Vice President's Message

I hope everyone is doing well, but remember, this is the time to plan for the needs of upgrading and repairing your gear for the upcoming year. Time will go quickly unless you get a head start now. Winter Hamfest is only a month away, so see what you need at bargain prices. Maybe? ARES Antenna Day is April 25th, I believe that you can find out about emergency antennas (NVIS) and other types. Nothing fancy, but with good results. Then,

ARRL Field Day on June 27th and 28th. We improved greatly last year over prior years ending up in the middle of Group 5A, as opposed to almost last (we were wrong group) the prior years. I hope we aim higher this year and get at least in the top quarter of 5A. So now is the time for planning. It is important so all of us are ready for this and general operation this year. Well, 73 to all and join us on the nets.

Upcoming Ohio Section Hamfests

02/16/2020 | Mansfield Mid-Winter Hamfest

Location: Mansfield , OH
Type: ARRL Hamfest
Sponsor: Intercity Amateur Radio Club
Website: <http://WWW.IARC.CLUB>

03/01/2020 | WinterHamFest

Location: Elyria, OH
Type: ARRL Hamfest
Sponsor: Northern Ohio Amateur Radio Society
Website: <https://www.noars.net/hamfests/winter-hamfest/>

New Extra Class Exam

by Tom Porter, W8KYZ

July 1, 2020 the Amateur Radio Extra exam changes. If you have a current ARRL extra class license manual it is

usable through June 30, 2020. So now is the time to finish studying for the extra. Good Luck.

Fascinating Video on Curious Uses of Batteries

From Chet, K8KIZ

New Battery Hacks will "Spark" Your Imagination

<https://www.facebook.com/TheRickLaxShow/videos/2346043425705770/UzpfSTE0MDQzNjU2MTY6MTAyMjE0NzQ2MjY4ODA3ODk/>

Says Chet:

Some, and only some, of these experiments may be authentic.

1. If you watch the video you will see the host put four 9 volt batteries in four corners of a cookie sheet and then have a top heavy top flip to it's smaller bottom. These

top heavy tops naturally do this without the use of 4 short-circuited 9 volt batteries.

2. Substituting a rolled-up piece of foil for a battery in a 2-battery remote will work, it just will not work great. Basically, you're only using a single battery so instead of 3 volts you're only powering the device with 1.5 volts.

3. Rolling up a battery in aluminum foil will glow red simply because you are short-circuiting the battery with an immense current flow, and the thin foil will heat up and glow red.

So, is the video worth watching? Sure.... But challenge yourself to explain why some of the effects are happening.

Newsletter Submissions

Email submissions for the Log to noarslog@noars.net. The deadline is seven days before the first of the month.

That gives us time to create and get the Log uploaded to the Website. Page 2

February Birthdays - Happy birthday!

Dave Germ, WV8P
Dave Fisher, KY8OSU
Bill Sheehan, K2WJS
Richard Keiper, KC8VFE
Ron West, N8OD
Baji Panchumarti, K8IIT

If your birthday doesn't appear here it's a good chance that it's not in our database. Please contact Carl, W8KRF so we can wish you a Happy Birthday!



January Meeting Attendance

Dan, W8AJF	Chris, KD2HCE	Walter, KE8NQL	Tom, K1TRB
Steve, WA0DVY	Harold, K8HRD	Ron, N8OD	Gary, KD8VIQ
Bill, AC8FD	Roger, AB8IF	Dave, KY8OSU	Bill, K2WJS
Tom, N8FDY	Chet, K8KIZ	Tom, W1PDI	Tim, NC8X
Elaine, KC8FOS	Carl, W8KRF	Alan, KF8PM	
Russ, KE8GNX	Tom, W8KYZ	Clark, N8PZD	
Joe, W8GWD	Bob, W8NNC	Stephanie, KD8TCD	

January Net Controls

Elaine, KC8FOS	Dave, KY8OSU
Carl, W8KRF	Tim, NC8X
Tom, W8KYZ	

Heard on the Nets in January

Dan, K8AGW	Bryan, W8JMI	Dave, KD8MXE	Gary, KD8VIQ
Fred, N8AHS	Dan, K8KGX	Jack, N8NDL	Bill, K2WJS
Dan, W8AJF	Carl, W8KRF	Linn, KD8NGE	Dan, N8WJZ
Rich, WA8CAC	Sandy, W8KYS	Ron, N8OD	Tom, W8WLI
Robert, NW8D	Tom, W8KYZ	Bill, N8UPZ	Tim, NC8X
Tom, N8FDY	Rick, KD8LQU	Dave, KY8OSU	George, WA8YVF
Elaine, KC8FOS	Bill, N8LXY	Dave, WV8P	Ann, KA8ZEP
Mark, KC8FQV	Jim, W8MCR	Alan, Kf8PM	Dave, KB8ZUN
Jody, KE8GKO	Alex, KE8MQH	Russ, WB8UPA	
Chris, KD2HCE	Anna, W8MTR	Bill, N8UPZ	

February 2020

Sun

Mon

Tue

Wed

Thu

Fri

Sat

						1
2	3	4 NOARS Monthly Meal 12 Noon 10M Net 8 PM NCS W8KYZ	5 Food Group 7PM 2M	6 2M Net 8 PM - NCS KC8FOS	7	8
9	10	11 10M Net 8 PM - NCS W8KYZ	12 Food Group 7PM 2M	13 2M Net 8 PM - NCS KC8FOS	14	15
16 VE Testing 12:50 PM	17 NOARS Meeting 6:30 PM	18 10M Net 8 PM - NCS KY8OSU	19 Food Group 7PM 2M	20 2M Net 8 PM - NCS W8KRF	21	22
23	24	25 10M Net 8 PM - NCS NC8X	26 Food Group 7PM 2M	27 2M Net 8 PM - NCS KY8OSU	28	29

Member Highlight: Roger Fell, AB8IF

Early History

The United States was losing to Russia in the space race! The successful launch and orbiting of Russia's Sputnik in 1957 made it apparent the US was experiencing a big science and technology gap, and talent was needed in a hurry. Recruiters from the US went around the world seeking scientists and engineers. In New Zealand, one such recruiter made Roger's father, a zoologist, "an offer



he couldn't refuse." The family packed up and came to the United States when Roger was 18.

School, Work, and More

Roger had already completed one year of college in New



Zealand, so he entered Harvard as a sophomore. He discovered during a senior year project, which involved microwaves, that the instruments were far more interesting than the science. He went into electrical engineering in graduate school at the University of New Hampshire. Besides graduate school, UNH played another major role in his life. On a warm summer Saturday night, Roger went to a party and took a seat next to a girl who didn't want him to sit there since she was saving it for another boy. The girl's name was Anita. Little did she know she would later become Roger's wife.

Roger was an electrical engineer for various companies over the years in New York state and Ohio, including local companies Nordson and Biomec, eventually retiring from QiG Group.

Life as a ham

Roger has been interested in radios for most of his life. During his first year in high school in New Zealand, Roger was looking at radio magazines in the library when he heard another student, Ron Wills, talking about building radios. It turned out Ron was a shortwave listener and got Roger into that hobby. Roger went on to obtain a no-code amateur radio technician license at the age of

sixteen, being the second person in New Zealand to do so. Roger says, "radio was a glamour field. Having your own crystal set was a status symbol."

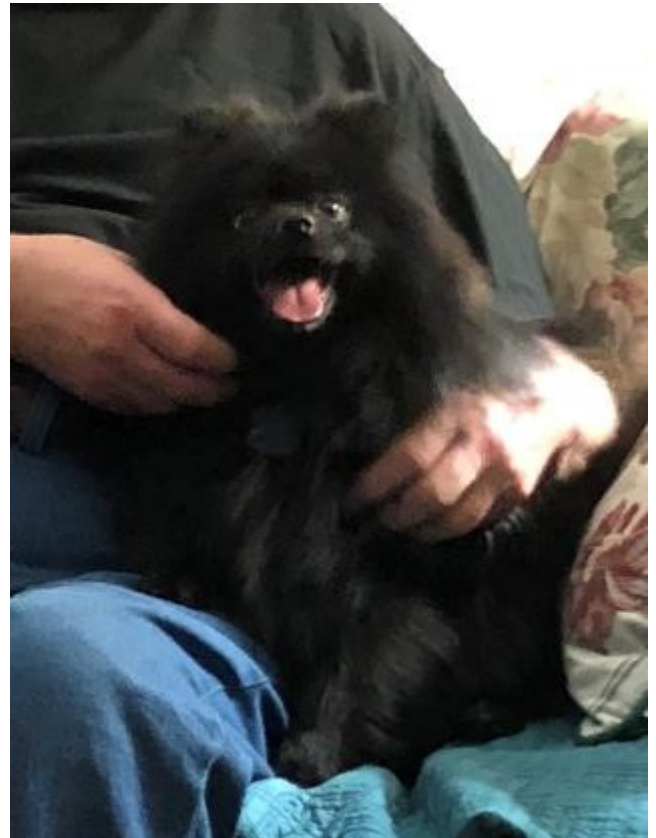
and running, and once it's running right, will use it for a while, then moves on to something else.

Other Hobbies

Roger has other hobbies, including gliding, which he practices through Fun Country Soaring in Wakeman, Ohio. That club's URL is <https://www.funcountrysoaring.com>. He also was active in BARPC (Buckeye Antique Radio and Phonograph Club) when the family lived in New York. Photos of his antique radios accompany this article.



Roger relates life to a house that has various supports; ham radio is one of his supports. He appreciates the many aspects of the hobby, having enjoyed AM on 2



Roger and Anita have a frisky, energetic, adorable Pomeranian named Wiggy, who joined us for the interview. Roger claims Wiggy was named after a piece of electronic test equipment, though it seems the name also reflects the dog's bouncy outlook on life.



meters, CW, sideband, PSK 31, and FT8. True to his nature, he deeply enjoys the technical aspect of amateur radio. Using design tools, he builds something, gets it up

Straight Key Night New Year's Eve and Day

by Tom, W1PDI

I made 12-15 CW contacts during SKN (Straight Key Night) this past New Year's Eve and Day. I fired up my 1960's novice equipment (Heathkit DX40 crystal-controlled transmitter, Heathkit HR20 receiver, HP23B power supply) and used my original SpeedX straight key. I set up the station on my work bench where I have a coax lead to a Carolina Windom strung between two trees alongside our house. Since I didn't have a T/R antenna relay I had to manually switch the antenna from transmit to receive and back again but managed through each QSO. We are so equipment-spoiled nowadays.

It had been at least five years since I last cranked up this

station and I was receiving good signal reports during SKN. Everything was going fine until smoke started billowing from the top the DX40. Appears I may have done in the Power Transformer and the caps and who knows what else. So, Jeff Covelli, WA8SAJ, has agreed to take a look at it for me. Luckily, I have a friend from back east sending me a "used" DX40 Power Transformer. We'll see how things turn out. Hopefully, I'll get the old DX40 ready for the next SKN.

I received a QSL card (attached) from an SKN contact reporting a pretty DX40 signal into Louisiana.

73,

Tom, W1PDI



WOODWORTH, LOUISIANA USA

N5CM

Rapides Parish

John Dempsey
1020 Jolie Circle
Woodworth, LA 71485

CONFIRMING QSO	DAY	MONTH	YEAR
W1PDI	01	01	2020
UTC	MHz	RST	MODE
18:59	14.054	599+	CW

PSE QSL TNX (✓)

Transceiver: Kenwood TS-590SG
Power: 100 Watts 350, horizontal
Antenna: loop up 60' in pine trees

Comments: Tom, tnx for fb SKN QSO. You have a great fist and ur DX 40 put out a vry strong, clean signal!
HNY vY73 esDX John 73, John

W1PDI
Tom Miller
Avon Lake, OH

The Premier Issue of On the Air is Now Available

Have you wondered how to get started in ham radio, or been in the hobby but still feel uncertain about what to do and have no elmer nearby? ARRL's newest magazine, *On the Air*, may be for you. It is available online at the ARRL website: <http://www.arrl.org/read->

[on-the-air](#). Access to this resource is a benefit to members. This first issue contains a guide to buying your first handheld radio, step-by-step instructions for building simple antennas for VHF and HF, and more.

Proposed Amendment to the NOARS Constitution

The principal governing body shall be a Board of Directors, consisting of the four current officers (President, Vice President, Secretary, and Treasurer), plus the ~~(delete- three)~~ most recent past president ~~(delete-s)~~ and two (2) full members from the general membership, hereafter known by and referred to as the Directors.

~~(Delete#2. In the event three past presidents cannot be found to serve as Directors, the positions will succeed to the most recent Vice Presidents.)~~

2. Should a vacancy exist after appointments are made ~~(delete- from both the past Presidents and past Vice Presidents)~~, the President may select and appoint full members to serve as Directors for a period not to exceed ~~(delete-one)~~ two (2) years. The term of a Director appointed from the membership will be commensurate with the president's term in office, and must be appointed bi-annually.

Officers:

2. Officers shall be elected annually in accordance with Article VII of the By-laws, for a term of ~~(delete-one)~~ two years. Only Full Members in good standing shall be eligible to be officers.

Proposed amendment to the NOARS By-laws

BY-LAWS OF THE NORTHERN OHIO AMATEUR RADIO SOCIETY

ARTICLE II

MEMBERSHIP:

6. Automatic Special Life Membership:

- C. It shall be the duty of the ~~Membership Committee~~ eligible member to notify the ~~candidate-Membership Committee~~ of their eligibility and to ~~make a record of the effect~~ a status change in the Membership Roster.

Page 6

ARTICLE IV

MEETINGS:

1. Regular business meetings will be held the third Monday of each month at ~~(delete-1900 at a)~~ at a time and place determined by the President with the consent of the board. Meetings may be changed due to holidays or special events.

Page7 ARTICLE VII

ELECTION OF OFFICERS:

In addition to the restrictions in Article III a candidate for office must be a member in good standing and must have attended at least four (4) meetings during the previous 12 months. The current President and Vice President may not run for reelection if he/she has held that office the two previous consecutive ~~(delete-years)~~ terms. Terms of office shall run for a two (2) year period with President and Vice President being elected in even numbered years, Secretary and Treasurer being elected in odd numbered years.

Membership Meeting Minutes January 20, 2020

Submitted by Elaine Wilkinson, KC8FOS.

The meeting was called to order at 6:30 PM by Club President, Carl, W8KRF. Twenty-five people were in attendance.

The Pledge of Allegiance was recited, followed by roll call by call sign. Walter, KE8NQL, was at his first meeting and joined the club tonight. He was welcomed.

A motion to dismiss reading the November minutes since they are in the Log was made by Steve, WA0DVY, seconded by Ron, N8OD. The motion passed.

Treasurer's Report – Tom, W8KYZ discussed the club's bank balance and expenses ie Windstream, registering with the Ohio Area Repeater Council, and Holiday Banquet. Habitat for Humanity and Second Harvest sent thank you letters for our donations in November. A motion to accept the Treasurer's Report was made by Dan, W8AJF, seconded by Tom, W1PDI. The motion passed.

Committees

Parliamentarian – Tom, N8FDY. No report.

Club Property – Tom, W1PDI. No report. Carl advised he has banners for the hamfest in March, which he will give to Tom, W1PDI to be put up at the college.

Repeaters – Carl, W8KRF. Repeaters seem to be doing OK. Will check them when the weather breaks.

Website – Carl. Up to date.

Membership – Carl. Received memberships tonight. Fifty-one members are up-to-date. Another fifty or so need to renew.

Field Day - Nothing yet.

Social Committee – Elaine, KC8FOS. February luncheon will be Tuesday, February 4 at noon at Golden Corral.

Programs – February – Dave Blood, W1AFC will talk about high frequency propagation. He wants questions!

Audience member Chris, KD2HCE asked about FT8 as a program. He offered presenting on FT8. Carl suggested FT4.

Hamfest - Sunday, March 1 at Lorain County Community College. Volunteers needed. Carl will have a sign-up sheet next month. Everything reserved. Set-up at 6 AM, volunteers be there at 5:30.

Sunshine – Tom, W8KYZ. He's feeling better. Thanked everyone who sent cards and messages of good will. 2019 a tough year. Bob, W8RET still the same. Harold, K8HRD was in the hospital for awhile. Ned, WD8CSP from Lorain passed away. He was a long-time member of the club. Tom will send card to the family. Advise Carl or another officer if you hear of this sort of thing. Carl asked for a volunteer to take Bob his HTs that Carl reprogrammed. Dave volunteered.

Nets - Elaine, KC8FOS. Nets are going well. Carl offered that 10 meters is lacking.

VE Testing Tom, W8KYZ. Five people tested yesterday. Walter, KE8NQL one of them. Received his general class. A freshman in high school tried twice and passed the second time and received a technician license.

Newsletter – Tom, N8FDY. Running out of “for sales.”

Old Business

Elaine, KC8FOS gave Holiday Banquet report. Thirty-two attended, eight more than 2018. A new restaurant will need to be found for the 2020 banquet. The Social Committee is already working on it. Restaurant recommendations asked for.

Carl thanked the membership for recognizing him by presenting him with the Member of the Year plaque at the banquet.

Constitutional amendment being worked on by Dave, KY8OSU and Steve, WA0DVY. Needs to be published in the newsletter before it can be voted on. Addresses elections of officers to avoid needing to fill four positions all at once.

Carl presented a 2020 budget. Basically, the same as last year. Discussed income: dues, hamfests, advertising, 50/50 raffles and expenses: hamfests, repeater, OARC, Website, picnic, holiday banquet, donating, Field Day, Sunshine, liability insurance, postage, meeting refreshments, President's discretionary fund. It's a zero budget. Motion to accept the budget as presented by made Bill, K2WJS, seconded by Clark, N8PZD. Motion passed.

Tom, W8KYZ announced an ARRL Technician License Study Manual is available. Free. Donated by W1PDI. Let Tom know. At their last meeting, the Board talked about

(Continued on page 11)

(Continued from page 10)

501C3. Legal Zoom will take care of everything for various costs. Being 501C3 as been talked about for many years. Discussion about why it was never taken care of before. 501C3 may result in more donations from businesses. Many comments were made.

New idea – Raffle tickets handed out at each meeting. Hold onto them, because at the end of the year a drawing for an HT will be held for.

Bob, W8NNC reminded us of a different date for the March meeting, one week early. March 9.

A motion to adjourn the meeting was made by Ron, N8OD, seconded by Tom, W1PDI. The motion passed. The meeting was adjourned at 7:02.

After the meeting Gary, KD8VIQ presented a program on DMR.



Looking for a good deal?

Free Desk and Operating Table

From the Estate of Mark Lewis, K8WON SK

Sauder desk and operating table. 30 inches high by 43 inches wide by 20 inches deep. 70 pounds. Two drawers.

Pick up in Avon Lake, Ohio.

Contact Tom, W8KYZ. 440-320-5523.

Free Technician License Manual Available

Donated by Tom, W1PDI

This free ARRL Technician License Manual is available to anyone who desires to become a ham radio operator.

Contact Tom, W8KYZ. 440-320-5523.

Our thanks to Tom, W1PDI for his donation.

The DX Engineering Retail Showroom

More products on the shelves—get hands-on with the newest radio gear!



- Friendly service
- Expert tech advice from active Hams
- Open-box deals
- Free product brochures
- Easy return processing

Come See Us!

Retail Showroom is Open
9 am to 5 pm, Monday-Saturday.

Even when the showroom is closed
you can order items at the Cashier:

Monday-Saturday: 9 am to 9 pm
Sunday: 9 am to 7 pm



The DX Engineering Retail Showroom

Inside the Summit Racing Retail Super Store
1200 Southeast Ave., Tallmadge, Ohio



From the Estate of Mark Lewis, K8WON SK For Sale (Funds will go to the family)

Yaesu FT-450D 160 – 6 meters HF radio. MH-31 mic. Manual. \$525.00.

Jetstream JTPS31MB 25 amp switching power supply. Adjustable 4V – 16V. User guide. \$65.00

Jetstream JTPS14BCI 6 AMP dual meter switching power supply. Adjustable voltage. \$45.00.

Icom IC-2000H 2 meter transceiver. 5W/10W/50W. Mobile bracket. Manual. HM-95 Mic. \$45.00

Daiwa CS-201 manual coax switch. \$20.00.

Book: ARRL Small Antennas for Small Spaces. Pristine. \$8.00.

Contact Tom, W8KYZ. 440-320-5523.

CW OP Lapel Pins for Sale, Created by Chet, K8KIZ



They have been sent to multiple states, Denmark, United Kingdom, Germany, Australia

CW OP Pins are \$5.75 each. US S/H is \$5.06 - International S/H* is \$15.50

(*The US Postal Service ships to most countries around the world.)

NOTE: This pricing includes shipping charges for up to 10 pins per envelope.

For Example:

1 pin + US 1st Class S/H \$10.81

2 pins + US 1st Class S/H \$16.56

3 pins + US 1st Class S/H \$22.31

1 pin + International S/H \$21.25

2 pins + International S/H \$27.00

3 pins + International S/H \$32.75

NOTE: This pricing includes shipping for up to 10 pins per envelope.

Envelopes are 5"x7" tan heavy paper with inside bubble padding.

Please send your order and full correct address with ZIP code to: CWpins05@gmail.com

Send your appropriate payment to:

www.paypal.me/ANCRSundials

Please advise me if you are using a different name with your payment (Example: a company name) so I can credit your email order.

Thank you! 73, Chet K8KIZ

For Sale by Dave, WV8P

Icom 703, QRP rig. Does not have six meters. 250 Mhz filter installed and a 500 Hz to install later.

Automatic tuner with an extra cable to use if installing it in a car.

Samlex power supply.

All items are in a hard case, ideal for travel. \$500

Contact Dave, WV8P at wv8p@roadrunner.com

NOARS Information

Members of the Board of Directors

President: Carl, W8KRF

Vice President: Dave, KY8OSU

Secretary: Elaine, KC8FOS

Treasurer: Tom, W8KYZ

Others: Tim, NC8X; Tom, N8FDY

Others

Net Manager: Elaine, KC8FOS

Club Trustee for K8KRG: Al, N8CX

NOARS Log Editors: Tom, N8FDY; Elaine, KC8FOS

Volunteer Examiners: Tom, W8KYZ; Joe, W8GWD;
John, KC8KI; Dave, K8WRS; Sallie, AB8GI

Membership

Membership is open to anyone interested in radio communication. Dues are: Full \$15, Associate (non-licensed) \$7, Family members of a full member are \$4 each. Membership forms are available at www.noars.net. Make checks payable to NOARS and mail them to: NOARS Membership Committee, 161 Herrmann Drive, Avon Lake, OH 44012.

Meetings

Meetings are held at 6:30 p.m. on the third Monday of every month, except August and December, at the North Ridgeville Branch of the Lorain County Public Library, 35700 Bainbridge Rd, North Ridgeville, OH. The doors open at 6:00 PM for a social time with coffee and donuts.

Meetings are open to the public and all are welcome.

Nets

NOARS nets are Tuesday nights at 8 pm on 28.370 MHz, and Thursday nights at 8 pm. on 146.700 MHz. All licensed amateurs are welcome.

Committees

Parliamentary Committee: Tom, N8FDY

Repeaters: Carl, W8KRF; Tim, NC8X

Field Day: Al, N8CX

Hamfest:

Sunshine: Tom, W8KYZ (temp)

Membership: Carl, W8KRF

Club Property Committee: Tom, W1PDI

Program Committee: Elaine, KC8FOS; Joe, W8DYZ;
Bob, W8NNC; Dave, KY8OSU

Social Committee: Elaine, KC8FOS; Dave, KY8OSU;
Ann, KA8ZEP

Public Relations Committee:
Dave, KY8OSU; Elaine, KC8FOS



VE Testing

VE Testing is offered the third Sunday of every month.

2929 West River Road
N. Elyria OH 44035,
from 12:50-3 PM.

NOARS

Winter Hamfest

Annual Hamfest and Computer Show

Sunday, March 1, 2020

8AM - 12PM

Lorain County Community College

John A. Spitzer Conference Center

1005 N. Abbe Rd.

Elyria, OH

Setup at 6:00 a.m.

Doors open at 8:00 a.m.

Climate controlled indoor vendor sales

Free Parking - Handicap Accessible

ARRL APPROVED HAMFEST

Just \$7.00 General Admission - under 12 free

6 ft. indoor vendor tables - \$10.00

PRIZES

Hourly Prizes starting at 9 AM

Need not be present for Main Prizes but must be present for all other prizes.

Mobile check-ins and directions on 146.70- (PL 110.9) NOARS repeater

For table reservation contact:

Carl Rimmer, W8KRF, at winterhamfest@noars.net or call 216-256-9624 (before 9PM)

Vendor Special: 20% discount on 6 or more tables with early reservation and payment. Cutoff February 1, 2020

To find out more, go to the NOARS web site: <https://www.NOARS.net/winter-hamfest/>