



NOARS Log



June 2022

K8KRG

Volume 58, Issue 6

Table of Contents

President's Message	1
VP's Message	2
Social Events News	3
May Lunch	4
Birthdays, Meeting Attendance, Heard on the Nets	5
Calendar of Events	6
Contest Corner	7
May 15 Fox Hunt	8
NOARS Membership Meeting Minutes	10
For Sale	13
NOARS Information	16

Prez Sez

It is so lovely to have a week of great weather. Personally, despite physical limitations, I have accomplished a few planned projects. I have started planting my garden, installed a flag pole I purchased at Hamvention and assembled my dipole mast, which is ready to erect if I can find some help. That is in addition to mowing my yard and doing other landscaping. I am sure many of you have been busy accomplishing your spring projects.

In addition to my buys at Hamvention, I also made the membership-approved purchase of the RigExpert AA-650 Zoom antenna analyzer and case. The User Manual is available on the website for those who may not know. If you think you might want to borrow the analyzer, please take some time to read the manual and become familiar with its operation. Pay particular



attention to Annex 2 -Precautions on page 25.

Continued on page 2

June Meeting

North Olmsted Library, 27403 Lorain Rd. 7 PM.

Coffee and donuts 6:30 PM.

The Membership Meeting will be Monday, June 20 at 7:00 PM.

Tom Sly, WB8LCD, ARRL Ohio Section Manager will speak about changes at the ARRL, the benefits of being a member and his time in amateur radio. Tom will answer any and all questions.

NOARS will send Zoom meeting information via email.

Nets

NOARS nets are Tuesday nights at 8 PM on 28.370 MHz, Wednesday nights at 7 PM on 146.700 MHz, PL 110.9, and Thursday nights at 8 PM on 146.700 MHz, PL 110.9. All licensed amateurs are welcome. Participation is encouraged and appreciated.



Continued from Prez Sez on page 1

It was great to see some of you at Hamvention. A few forums were of particular interest to me because of our club activities. Fox Hunting was fascinating and updated me on some currently available equipment.

I was very excited to meet up with Alex, N8QL, a past member of NOARS. He now lives in the Columbus area and is married to a charming and beautiful Christina. Christina took her Technician test at Hamvention and passed. I had to take a selfie with them.

That is all I have for this month. Until next month,

73,

Carl W8KRF



Vice President's Message June 2022

First VE Testing Session a Success.

Our first VE Testing Session on May 28 was, as they say, bang awesome. It was held at the North Olmsted Library, 27403 Lorain Rd., North Olmsted at 10 AM. Greeters were Connie, K8CCS; John, W8LYO. Graders were Ron, N8EGZ; Dave, KD8MXE; Steve, K8NIA; Bob, W8OOT; Bill, K2WJS. Bill, N4NZZ, showed up to help. Liaison was Elaine, KC8FOS. Special observer was Stephen, N8WB.

Six candidates tested. All took the Technician test. Five passed. Of those, two took and passed the General test. One candidate failed the Technician. Licenses earned: Technician: 3; General: 2. Thanks to all those who participated in the testing process. A special thanks goes to Stephen, N8WB, whose help was invaluable. Great job, everyone!

The next test session will be Saturday, June 18 at 10 AM at the North Olmsted Library, 27403 Lorain Rd., North Olmsted.

Silent Keys

Robert Sull, W8IMO SK of Avon Lake, passed away April 26, 2022. He was 80 years old. Some years back Bob started a weekly local net on 146.43 simplex on Tuesday night. Bob enjoyed the NOARS monthly breakfast at Jake's on the Lake, Avon Lake. Covid unfortunately ended this get-together. Joe was an Advanced Class licensee who was first licensed in 1963 and earned DXCC (an ARRL award for contacting 100 countries), RCC (ARRL Rag Chewers Club), WAS (Worked All States) on 10 meters, and was a life member of ARRL and QCWA (Quarter Century Wireless Association).

Joe Cebula, W8GWD SK Joe, of Elyria, passed away on Thursday, May 5, 2022 at University Hospitals in Cleveland after a long illness. He was 90 years old. Joe was an active Ham Radio operator during his lifetime. He became an Extra Class Volunteer Examiner March 27, 2001 and had 182 testing sessions to his credit. Quite a laudable record. Joe checked into our Thursday night NOARS nets from home or mobile. He spent several years as a resident in Life Care, Elyria. To his credit he also wrote Amateur Radio technology-related articles for the NOARS Log.

June Social Events



Fox Hunt

Saturday, June 4 at 11 AM in Bradley Woods Reservation, 4538 Bradley Road in Westlake. No fox hunt gear necessary, all are welcome. Lunch afterwards at a restaurant for those interested.

NOARS June Lunch

Tuesday, June 7. Monthly Lunch at **noon at the Golden Corral**, 1519 West River Rd., Elyria. All are welcome.

Pre-Field Day Meeting

Saturday, June 11. NOARS and LCARA Pre-Field Day meeting at **10 AM at the Field Day** site, Indian Hollow in the Lorain County Metroparks. Confirming current version of N3FJP logging software, and testing network. If you plan on operating at Field Day, attend this important meeting.

NOARS Outdoor Portable Set-Up

Saturday, June 11 at 11 AM at the pavilion behind **North Olmsted High School**, 27301 Butternut Ridge Road, North Olmsted. Bring your portable gear. You do not need portable gear to attend. Come see portable gear in action and try it out, if you wish.

NOARS and LCARA Field Day

Saturday and Sunday, June 25 and 26 in, Indian Hollow in the Lorain County Metroparks.

What Atoms Really Look Like?

Submitted by Chet, K8KIZ

As amateur radio operators we work with the concept of electrons all the time. But these are 'bundled' concepts of things far more complicated than we realize. To drive that

point home, here's an intriguing video that may be more challenging than satisfying. The good news, it's only 5 minutes long.

<https://www.youtube.com/watch?v=W2Xb2GFK2yc>

May Lunch

Twelve of us gathered at the Golden Corral for the monthly NOARS lunch on May 3. The lunches are

always on the first Tuesday of each month at noon at the Golden Corral in Elyria. Everyone is welcome.



June Birthdays

Bill Holmes, N4NZZ
Denise Evans, SWL11
Tom Binns, KE8BTR

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!



May 16, 2022 Membership Meeting Attendance

In Person	WA0DVY, Steve	Zoom	KE8MMY, Chris
W8LYO, John	W8AJF, Dan	KC3QND, Jeany	N8CX, Al
W8KRF, Carl	KA8ZEP, Ann	KY8OSU, Dave	K2WJS, Bill
KC8FOS, Elaine	KD8OCW, Jim	KE8NQK, Pete	KE8DIH, Mark
N8FDY, Tom	AB8GI, Sallie	K1TRB, Tom	KE8KAT, Joe
W8KYZ, Tom	K2WJS, Bill	W2CBZ, Betsy	Patty Lupica
WH2U, John	W1PD, Tom	N8NDL, Dr. Jack	
N4NZZ, Bill	KM4GSF, Linda	KE8OQA, Dennis	
K8CVM, Chuck		W8NNC, Bob	

Heard on the Nets in May

Heard on the Nets in May	Bob, KI5HKN	Linn, KD8NGE	Jim, KE8SAF
Dan, K8AGW	Steve, WA1KRS	Steve, K8NIA	Scott, K8SMK
Dan, W8AJF	Carl, W8KRF	Pete, KE8NQK	Mike, N8WHR
Fred, N8AHS	Sandy, W8KYS	Jim, KD8OCW	Bill, K2WJS
Betsy, W2CBZ	Tom, W8KYZ	Ron, N8OD	Tom, W8WLI
Chuck, K8CVM	Chuck, KB8LJ	Dennis, KE8OQA	Bill, N8WS
Tom, N8FDY	John, W8LYO	Alan, KF8PM	John, N8UY
Elaine, KC8FOS	Earl, W8LYY	Clark, N8PZD	Norm, N8YAA
Mark, KC8FQV	Alex, KE8MQH	Jeany, KC3QND	Ryan, K9ZOE
Chris, KD2HCE	Dave, KD8MXE	Shawn, KE8RMV	Jeff, KB8ZUN

June, 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Food Group 7PM 2M NCS Elaine, KC8FOS	2 2M Net 8 PM NCS Jeany, KC3QND	3	4 Fox Hunt 11:00 AM
5	6	7 NOARS Lunch at Noon 10M Net 8 PM - NCS Elaine, KC8FOS	8 Food Group 7PM 2M NCS Jeany, KC3QND	9 2M Net 8 PM NCS Tom,	10	11 Pre FD Mtg 10 Am Portable Gear Day 11 AM
12 Zoom Mentor 11 AM	13	14 10M Net 8 PM - NCS Tom, W8KYZ	15 Food Group 7PM 2M NCS Elane, KC8FOS	16 2M Net 8 PM NCS Carl, W8KRF	17	18 VE Testing 10AM North Olmsted Library
19	20 NOARS Meeting 7:00 PM	21 10M Net 8 PM - NCS John, W8LYO	22 Food Group 7PM 2M NCS Jeany, KC3QND	23 2M Net 8 PM NCS Elaine, KC8FOS	24	25 Field Day
26 Field Day	27	28 10M Net 8 PM - NCS Dan, W8AJF	29 Food Group 7PM 2M NCS Elaine, KC3QND	30 2M Net 8 PM NCS Carl, W8KRF		

Contest Corner



June Contests

	Contest Name	Bands	Mode	Time UTC	Website
4-5	Kentucky QSO Party	160-2 M	CW, Ph, Dig	1300-0100	https://kyqsoparty.org/rules/
4-5	ARRL Internationl Dig Contest	160- 6M	Digital	1800-2359	https://www.arrl.org/arrl-digital-contest
8	VHF-UHF FT8 Activity Contest	70 cm	FT8	1700-2000	https://www.ft8activity.eu/index.php/en
11-13	ARRL June VHF Contest	6 M and higher	CW, Ph, Dig	1800-0259	https://www.arrl.org/june-vhf
18-19	West VA QSO Party	CW, Ph, Dig	80- 10 M	1600-400	https://www.qsl.net/wvsarc/
25-26	ARRL Field Day	All	CW, Ph, Dig	1800-2059	https://www.arrl.org/field-day

These are but a few. Find many more contests in each month's QST Magazine, CQ Magazine, and at WA7BNM Contest Calendar, <https://www.contestcalendar.com>.



Don't Forget the Fox Hunt

Hunters and Chatters at the Fox Hunt May 15

Twelve folks were at the May 15 Fox Hunt, some chatting, some hunting, some doing both. We all had a

great time. Please, join us. The hunts are open to everyone.





NOARS Membership Meeting Minutes

May 16, 2022

Submitted by John, W8LYO

The meeting was held in person at the North Olmsted Public Library and via Zoom.

The meeting was called to order at 7:00pm by club President Carl, W8KRF. There were 15 people in attendance and 14 via Zoom for a total of 29.

The meeting was started with the Pledge of Allegiance.

Introductions we conducted for the first time in a while starting with Zoom and then in person.

Carl made a motion to accept the minutes from the April meeting as they were published in the NOARS log. Jim KD8OCW seconded the motion. There was no discussion and the motion passed.

Committee Reports:

Treasurer: Tom W8KYZ

The club has \$9,926.70

Expenses in past 30 days:

- Windstream (Repeater phone and Internet) \$73.45
- Donation to St. Jude's children's research hospital In the name of W8IMO (Silent Key) \$50.00
- NOARS Zoom account annual \$121.41

No questions. Motion to approve the treasurer's report Pete KE8NQK, Ann KA8ZEP seconded the motion. Motion passed.

Parliamentary: nothing

Club Property: Tom W1PDI not yet present

Carl W8KRF offered to take over the position and hold the property since Tom will need to clean out his locker by the end of the month. Tom will be moving to Florida May 2023.

New Business Carl W8KRF

Will discuss repeaters under new property.

NOARS stopped the repeaters from connecting to the Borealis net on Wednesday and Sunday. This was due to issues arising and SARA backing out of that net.

Website should be up to date; if you see something let someone know so it can be corrected.

Membership access is available. If you have not tried it please go to the members only section and try logging in.

We lost 2 members - silent key's W8IMO and W8GWD. Both will be missed, W8GWD was a contributor to the newsletter writing many articles. We gained a new member WH2U John who joined so membership is at 93. The roster is up to date on the website.

Field Day: Al N8CX

Email was sent out with the setup. Dave KY8OSU will not be participating this year, his 40 meters phone slot is on hold temporarily for someone that is interested. If not, others are interested.

Pre-field day meeting will be Saturday, June 11th 10:00am at the Indian Hollow Reservation, Parsons Rd, Grafton. The field day N3FJP application will be used. It is a NEW version you will need to have. The new version no longer supports older operating systems like Windows XP and Vista. Plan accordingly. Logging will be tested during this time with the network router and new server. If you are going to participate and log, please come for the testing.

Social committee: Elaine KC8FOS

NOARS monthly first Tuesday lunch is on June 7th Noon at the Elyria Golden Corral.

Antenna day for June 11th will be rescheduled possibly later in the day. It will be held at the North Olmsted High School in the Pavilion behind.

Continued on page 11

Continued from Meeting Minutes on page 10

Programs: Elaine KC8FOS

Tom Sly WB8LCD is asked to present his program on the benefits of ARRL membership. He should be at the June meeting.

NOARSfest

Coming up in July, will need more volunteers. Will need 6-8 people for parking lot shifts for the flea market. 2 people needed for each 2-hour shift. Will have VE testing so also will need people up front. After field day will concentrate on getting ready.

Sunshine: Tom W8KYZ

W8IMO silent key Bob Sull, Avon Lake, used to have a net on 146.430 simplex for anyone in the area.

W8GWD silent key was a member for many years and a VE who had 181 sessions since 2000.

Net Manager: Jeany KC3QND

10 meter good. 2-meter food group slowing down now that it is summer. Thursday nights are going well.

VE: Elaine KC8FOS

The first session will be May 28th at the North Olmsted Public Library. Bill K2WJS, Sallie AB8GI and Tom W8KYZ in attendance and will be grading the tests. Elaine KC8FOS will be doing the paperwork to the FCC. Stephen N8WB from SARA will be coming to observe and make sure things are done correctly.

Testing June 18th at North Olmsted Public Library

Testing at NOARSfest

If anyone is a VE and interested, please talk to Elaine KC8FOS

Newsletter: Tom N8FDY

Any submissions need to be in by May 27th. Plenty of room for Ad's anything you want to sell.

New Business:

A board meeting was held May 12th. A question was raised by Tom W8KYZ about the 145.150 repeater. It is not on the air and we are paying an annual fee of \$5.00 but also holding the frequency. Looking for consensus on if the frequency should be given up. It is crossed out on the website and not in service. A question was raised about giving the site to another club. The site it is at cannot be accessed anymore as it is in an apartment complex in a storage closet. Was originally set up linked as a way for East side users to get on nets. Equipment and antenna are old. A question was raised about using the old equipment for parts. The site has not been accessed in 10 years and the equipment is not modern and holds no value. Will try to get access and pull equipment out to decide what to do with it. Plan will be to not maintain that frequency and let someone else have it. Question raised about a vote. There will be no vote, it is not necessary and a repeater committee decision. Trying to be transparent and see what everyone is thinking. If we could find a location, we have a newer spare repeater that could be put up. Locations are hard to find and now some require payment. Comment raised that LERA has been looking for 2 years. Fortunate to have location in Elyria.

Announcements

Dr Jack has 2 points:

Hartland radio and Joe and Patty with eBay affiliate are back online as resellers of COMPACTenna.

Will be at NOARSfest and do the usual double down donation of COMPACTennas. Will have a display and debuting new models. 2-meter 440 microwave.

Anyone at Hamvention visit Building 5 and COMPACTenna.

Carl W8KRF

Thanked Dr. Jack on behalf of NOARS for the generous donation.

ARRL has an event app for Hamvention (ARRL Event) for planning your day, connecting with attendees, food and prize drawings.

Continued from Meeting Minutes on page 11

Question raised about how many from the club are going. About 7-8 attending.

Club property: Tom W8KYZ

Is it time for NOARS to get a new antenna analyzer? Currently have the MFJ-269 older version, an original that NOARS has had for 20 years. Looking to get a Comet or Zoom if anyone has suggestions. Idea to get something that does 160 – 10, 2, 440 and 220. The current one has been used. If you have ideas what to look at let Tom W8KYZ know. No estimate yet on the amount it will cost but after the analyzer, connectors and carrying case could be \$500+. Would like a recommendation to spend up to \$1,000.

Discussion: QST had reviews of analyzers. Club should get analyzer that shows the scan of frequencies so that you can see the resonance.

Motion to approve up to \$1,000 by Chuck K8CVM second by Sallie AB8GI.

Zoom comments: Dr Jack wanted to discuss the disparity in vector network analyzers and SWR only devices. VNAs do not do as well as a good SWR meter. VNA's that can do as good a job are commercial units

that cost between \$3,000 - \$30,000. Packing a lot of frills in a device it will not do anyone of those perfectly. In the NOARS price range, there is no perfect answer. Do the research.

There are some that are not overly expensive that have been compared to lab-based instruments like the German designed FA-VA5. Quite accurate and provides graphs. Worth looking at.

Dr Jack mentioned that heat up time changes the reliability and shift of SWR.

The club needs something that people can check out and is easy to use.

Agreed by members that an antenna analyzer has to be easy for a new ham or others to use. Something simple to make your first antenna.

The club is looking for something for an average user with no experience.

Motion to adjourn by Bill W2WJS, second by Tom W1PD and accepted at 7:57 pm.

50/50 raffle winner Steve WA0DVY.

There was no program after the meeting.



VISIT OUR HAM RADIO SHOWROOM TODAY!

Step inside our Showroom Monday through Saturday, 9 am to 5 pm. Or place your orders and pick them up at the curb. Here's how:

- Pick-up available from 9 am – 8 pm, Monday-Saturday and 9 am – 7 pm, Sunday.
- Place your order at DXEngineering.com or by calling 1-800-777-0703. All orders must be prepaid.
- Pull into a designated curbside pickup space in front of the Summit Racing Retail Store. You will need valid ID, your order number, and the physical credit card you used or Pay Pal receipt.
- Only the person who purchased the item may pick up the order.

We look forward to seeing you!

DXEngineering@DXEngineering.com

The DX Engineering Retail Showroom

1200 Southeast Ave. • Tallmadge, Ohio

DX ENGINEERING®



For Sale by Sandy, W8KYS

Tailtwister antenna rotor with controller. \$250.00

Ultimate Transmatch 2 kw antenna tuner. 160 to 10 meters. \$175.00

Contact Sandy, W8KYS. 440-647-2255

For Sale from the Estate of WB8ACU SK

Kenwood TS-590 with MC-60 mic. \$810.00

Kenwood SP-23 speaker. \$90.00

Kenwood PS-53 20 amp power supply. \$105.00

Dentron GLA-1000 linear amplifier. \$240.00

MFJ- 962D antenna tuner. \$165.00

Radio Shack HTX-252 2 meter transceiver. \$45.00

TGM HF mini quad antenna. \$180.00

Alliance antenna rotor. \$60.00

Alpha Delta DX-B sloper antenna (160/80/40). \$45.00

Astron RS-7A 7 amp power supply. \$45.00

Contact Brian, 419-366-3099

Reduced Price

Estate Sale, KG8BP, SK, ED DOEHNE

Cushcraft ARX2 Ringo Ranger 2 meter vertical antenna. Was \$45.00, now \$35.00

MFJ-941D Versa Tuner II 300w, 1.8-30 MHZ swr/watt meter. Was \$70.00, now \$45.00

Yaesu FT-209RH 2 meter HT. Needs battery, manual included. Was \$10.00, now \$5.00

Kenwood TR-2400 2 meter HT. ST-1 base, mic. Needs battery. Was \$10.00, now \$5.00

Para Dynamics PDC 600 SWR/power/modulation meter. Was \$20.00, now 10.00

Mars SW 10 SWR meter. 10/11 meters. Was \$15.00, now \$5.00

Pal Electronics KW-1. 10/11 meter power/SWR meter. Was \$10.00, now \$5.00.

Contact Tom, 440-320-5523 or tporter161@oh.rr.com

For Sale from Tom, W8KYZ

Aluminum carrying case for HTs, analyzer, HF radios. (6w x18l x13h). Add your own foam to suit your needs \$20.00

Astron RS-12, 12amp power supply. \$40.00

Astron RS-35M, 30amp power supply. \$85.00

Cushcraft ARX-2 Ringo Ranger 2 meter antenna. \$35.00

Contact Tom, 440.320.5523 or tporter161@oh.rr.com



Ad Submission Guidelines

Electronic ads may be emailed to noarslog@noars.net.
Printed ads may be sent to NOARS Log, 161 Herrmann Drive, Avon Lake, OH. 44012. The deadline for submissions is seven days before the first day of each month. All must include: asking price, sellers name, call sign and phone number. Only ads from current NOARS

members, or paid advertisers will be accepted. If your items sell, please notify the Log editors at noarslog@noars.net so the ad can be removed. All ads will be removed (unless updated) after four months. NOARS reserves the right to refuse any ads.

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



Chet Roberts

22h

How would you like a CW OP label for a coffee mug, car window, or whatever? Get 3 of these 3" durable, waterproof and dishwasher safe labels by sending \$5 WITH a self-addressed AND self-stamped envelope to: Chet Roberts K8KIZ, 173 Fredericksburg Drive, Avon Lake, OH 44012-73!



NOARS Information

Members of the Board of Directors

President: Carl, W8KRF

Vice President: Elaine, KC8FOS

Secretary: John, W8LYO

Treasurer: Tom, W8KYZ

Others: Bob, W8NNC, Tom, N8FDY

Others

Net Manager: Jeany, KC3QND

Club Trustee for K8KRG: Al, N8CX

NOARS Log Editors: Tom, N8FDY; Elaine, KC8FOS

Volunteer Examiners: Elaine, KC8FOS; Glenn, AF8C;

Ron, N8EGZ; Sallie, AB8GI; John, KC8KI; Tom, W8KYZ; John, W8LYO; Dave, KD8MXE; Steve, K8NIA; Bob, W8OOT; Bill, K2WJS; Ann, KA8ZEP

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

NOARS May meeting will be held at the North Olmsted Library, 27403 Lorain Rd. at 7 PM. Coffee and donuts at 6:30. All are welcome.

Nets

NOARS nets are Tuesday nights at 8 pm on 28.370 MHz, Wednesday nights at 7 pm on 146.700 MHz, and Thursday nights at 8 pm. on 146.700 MHz. All licensed amateurs are welcome.

VE Testing

Saturday, June 18, 10 AM at North Olmsted Library 27403 Lorain Rd.

Net Control Stations

Carl, W8KRF
Tom, W8KYZ
Dan, W8AJF
Jeany KC3QND
Elaine, KC8FOS
John, W8LYO

Committees

Parliamentary Committee: Tom, N8FDY

Repeaters: Carl, W8KRF; John, W8LYO;

Pete, KE8QNK; Bryan N8OOF

Field Day: Al, N8CX

Hamfest:

Sunshine: Tom, W8KYZ

Membership: Carl, W8KRF

Club Property Committee: Tom, W1PD

Programs Committee: Elaine, KC8FOS;

Bob, W8NNC; Pete, KE8NQK;

Jeany KC3QND

Social Committee: Elaine, KC8FOS;

Ann, KA8ZEP

Public Relations Committee:

Chris, KE8MMY, Tom, W1PD