



NOARS Log

January 2022 K8KRG Volume 58, Issue 1



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Prez Sez

Can you believe it? We are entering another year. It is somewhat of a cliché, but where does the time go? December was not a very good month for me. Although vaccinated and boosted, I still caught Covid and experienced a rough couple of days with severe muscle and joint pain, coughing, and a sore throat but never a fever which seemed strange. The most frightening was the loss of taste and smell for nearly a week. Fortunately, those senses returned, and all seems good for now.

I could not attend the banquet because of the Covid infection. I did two self-tests that Saturday afternoon, and both were positive. I was very much looking forward to the annual banquet, and it was hard to miss it. I hope those

who were able to attend had a festive time. Congratulations to all the awardees. Thank you for all you did and continue to do for NOARS.

I understand that Dave KY8OSU, our vice president, has moved to Texas, so if he resigns his position, we will need to hold an election to replace him. Also, it is never too soon to prepare for our 2022 elections of the President and Vice President. The Constitution forbids me to run for office again, so we need someone to step up and take over the reins. So, please give some thought to whether you would like to be an officer or know someone who would.

Our next big event of the year is the Winter Hamfest. We will need a few of you to take over the MC duties. Tom,

In Person Meeting

North Ridgeville Library January 17 at 6 P.M.

AllStar

AllStar: Everything You Always Wanted to Know but Were Afraid to Ask. Join us for a presentation about this network of amateur radio repeaters accessible via VoIP, by Jason McCormick, N8EI of the Silvercreek Amateur Radio Association.

You can arrive at or after 5:30 PM. Coffee and donuts will be available.

Nets

NOARS nets are Tuesday nights at 8 PM on 28.370 MHz, Wednesday Night 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

W8KYZ, will be very busy doing other things. It is not hard to do and requires you to welcome attendees, make announcements, and draw and announce door prize winners. If you would like to assist, please contact Tom, W8KYZ, or any other officer. Tom will be able to give his expert advice on performing that function.

Happy New Year to all. May 2022 be prosperous for you and yours and NOARS.

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

73,

Carl W8KRF

Certificates of Appreciation and More at the Holiday Banquet

Receiving certificates of appreciation were Ann, KA8ZEP and Dan, W8AJF for 50/50 sales at NOARS hamfests; Jeany, KC3QND and Pete, KE8NQK for serving as net control stations; Al, N8CX for being Trustee of the NOARS license and Chairperson of Field Day; John Dolinar, W8LYO for being technical advisor at club membership meetings and the Field Day networking system; and Steve, WA0DVY for issuing and maintaining ID badges. Jeany, KC3QND and Pete, KE8NQK

received the 2021 President's Award for consistent help and energetic service to the club on the Program Committee, at the Hamfest and more. Bob Plow, W8NNC received the Ham of the Year award for service as a Board of Trustees member, member of the Program Committee, and presenter of programs. Thanks go to Clark, N8PZD for contributing yummy candy prizes, and to Brenda Brooks for submitting photos of the banquet for the Log.

Jeff, Associate Member, Passes Tech Test

Congratulations to Jeff on passing the Technician test in December! His call sign is KE8TOV. He says he took the test online with a group out of LA, however, the examiners are throughout the States. He says he'll tackle

the General and Amateur Extra in the coming weeks. He thanks the club for advice and help during his first meeting this past October, and he'll see us in January.

Larry Shimerka, N8OWS, SK

Larry Shimerka, N8OWS SK passed away December 17, 2021. He was 65 years old. Larry lived in Seven Hills and was a new member of NOARS, also a member of the Woodchuck Amateur Radio Club, Cuyahoga Amateur Radio Association and Geauga Amateur Radio Association.

He was first licensed in 2003 and had an Extra Class

License. He was a Volunteer Examiner for the Laurel Group and the W8HF group that tested at the American Red Cross in Elyria. Larry primarily worked 2 meters and had just become interested in DMR and Yaseu System Fusion.

Funeral arrangements will be announced when we receive information.

January Social Events

NOARS January Lunch is Canceled

Due to the increasing spread of the Covid-19 virus and its variant, the Social Committee has canceled the NOARS monthly lunch in January. We hope to see you all in February.

Elaine, KC8FOS

Ann, KA8ZEP

December Lunch

Ten of us were at the monthly NOARS lunch December 7 at Golden Corral in Elyria: Bill, N8WS and Judi, WD8ASV; Tom, W8WLI and Pat; Chris, KE8MMY; Jeany, KC3QND; Pete, KE8NQK; Allen, KE8KZO; Tom,

N8FDY; Elaine, KC8FOS. The editors apologize for the lack of photos. The photographer was too busy eating to remember to take any.

VE Testing

01/09/2022 | Akron OH 44326-1000

Sponsor: Cuyahoga Falls ARC
Location: Akron Summit Co Library
Time: 6:30 PM (No Walk-ins / Register or Call ahead)
Contact: James E. Grover (330) 928-8921
Email: education@cfrac.org

01/09/2022 | Independence OH 44131-4841

Sponsor: Cuyahoga ARS
Location: Old Elmwood Recreation Center
Time: 9:15 AM (Walk-ins allowed)
Contact: Metro Sinko
(216) 520-1320
Email: METRO351@SBCGLOBAL.NET

Another VEC is W5YI-VEC. They offer remote testing. Find information and a schedule at <https://www.w5yi.org>

Great Lakes Division Hamfests

01/16/2022 - Sunday Creek Amateur Radio Federation Hamfest

Location: Shade, OH
Type: ARRL Hamfest
Sponsor: club members
Website: QRZ.KC8AAV

02/05/2022 - HARA Swap & Shop

Location: Negaunee, MI
Type: ARRL Hamfest
Sponsor: Hiawatha Amateur Radio Association
Website: <https://www.qsl.net/k8lod>

01/23/2022 - HPARC Swap

Location: Royal Oak, MI
Type: ARRL Hamfest
Sponsor: Hazel Park Amateur Radio Club
Website: <https://hparc.org/swap/>

02/12/2022 - Cherryland Amateur Radio Club 48th Annual Swap-N-Shop

Location: Traverse City, MI
Type: ARRL Hamfest
Sponsor: Cherryland Amateur Radio Club
Website: <http://www.CherrylandARC.com>

Contest Corner



January Contests

Date	Contest Name	Mode	Time UTC	Website
1	ARRL Kids Day	Phone	1800-2359	https://www.arrl.org/kids-day
3	K1USN Slow Speed Test	CW	0000-0100	http://www.k1usn.com/sst.html
8 & 9	ARRL RTTY Roundup	Dig	1800-2359	https://www.arrl.org/rtty-roundup
15 & 16	North American QSO Party	CW	1800-0559	https://ncjweb.com/naqp
15-17	ARRL VHF Contest	CW Phone Dig	1900-0359	https://www.arrl.org/january-vhf
22 & 23	North American QSO Party	Phone	1800-0559	https://ncjweb.com/naqp/
28-30	CQ 160-Meter Contest	CW	2200-2200	https://www.cq160.com/
29 & 30	Winter Field Day	CW Ph Dig	1900-1900	https://www.winterfieldday.com/

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

Chinese Using ELF to Communicate with Their Submarines

Submitted by Chet, K8KIZ

An article from Business Insider reveals some very interesting info.

A massive antenna in China can use Earth itself to send signals to submarines thousands of miles away. The antenna's location hasn't been revealed, but its signals can reach submarines across vast distances, researchers say. A joint experiment with Russia confirmed a "ping" from the facility can also travel effectively underground.

The biggest antenna on the planet is up and running in central China, opening up long-distance communications with submarines as well as civilian applications, according to engineers and scientists involved in the project. The exact location of the facility has not been revealed but is believed to be somewhere in the Dabie Mountains, a protected natural reserve straddling Hubei, Anhui and Henan provinces.

From space, the antenna, which is formed by a network of cables and pylons much like those in ordinary power lines, would look like a giant cross more than 100 km (62 miles) long and wide. But at the ends of those lines, copper nodes are fixed deeply into thick granite. Two powerful underground transmitters — capable of working independently in case one is damaged — charge one megawatt of electrical current and turn the Earth into a giant radio station.

According to a paper published in last month's Chinese Journal of Ship Research, receiving devices planted 200 metres (700 feet) below the surface on the sea floor can effortlessly pick up signals from the giant antenna 1,300 km (800 miles) away — a range that covers the Korean peninsula, Japan, Taiwan and the South China Sea.

For the rest of the article, go to <https://bit.ly/3HI5fTV>

January Birthdays

Tom Southam, W8WLI
Russell Graham, KE8GNX
Karen Wright, KD8JBK
William Gardner, KB6ZNR
Bob Plow, W8NNC
Jane Reed, K8JGR
Dan Bender, KE8OWK
William Adams, WD8OSJ
David Novotny, N8RRC
Elijah Molseed, KE8NES

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!



Heard on the Nets in December

Jeff, K8ACF
Dan, K8AGW
Dan, W8AJF
Rich, WA8CAC
Chuck, K8CVM
Tom, N8FDY
Elaine, KC8FOS
Chris, KD2HCE
Bryan, W8JMI
Chet, K8KIZ
Carl, W8KRF

Tom, W8KYZ
Chuck, KB8LJ
John, W8LYO
Earl, W8LYY
John, KE8MAI
Jim, W8MCR
Jim, W8NIN
Pete, KE8NQK
Jim, W8NRX
Bill, N4NZZ
Jim, KD8OCW

Ron, N8OD
Dennis, KE8OQA
Dave, KY8OSU
Dan, KE8OWK
Dan, N8PCK
Bill, W8PKT
Alan, KF8PM
Jeany, KC3QND
Shawn, KE8RMV
Jim, KE8SAF
Mark, KE8TCE

Dan, N8TCK
Tony, KB8TK
Tom, W8WLI
Bill, N8WS
Cal, N8XB
Lenny, N8XLQ
Norm, N8YAA
George, WA8YVF
Ann, KA8ZEP

January, 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 NOARS Lunch CANCELED 10M Net 8 PM - NCS Elaine, KC8FOS	5 Food Group 7PM 2M NCS Elaine, KC8FOS	6 2M Net 8 PM NCS Jeany, KC3QND	7	8
9	10	11 10M Net 8 PM - NCS Tom, W8KYZ	12 Food Group 7PM 2M NCS Jeany, KC3QND	13 2M Net 8 PM NCS Tom, W8KYZ	14	15
16	17 NOARS Meeting 6:00 PM	18 10M Net 8 PM - NCS John, W8LYO	19 Food Group 7PM 2M NCS Pete, KE8NQK	20 2M Net 8 PM NCS Carl, W8KRF	21	22
23	24	25 10M Net 8 PM - NCS Dan, W8AJF	26 Food Group 7PM 2M NCS Elaine, KC8FOS	27 2M Net 8 PM NCS Elaine, KC8FOS	28	29
30	31					

2021 Holiday Banquet

Eighteen people gathered at the NOARS Holiday Banquet December 4th at the City Club Restaurant and Lounge in North Olmsted. Attending were Al, N8CX and Barb Moriarty; Corey, KE8PQW and Brenda Brooks; Sara, KC8KSU and Bryan, N8OOF Torok; KD2HCE and Lisa Trifari; Dan, W8AJF and Ann, KA8ZEP Wadworth; Steve Kaplan, WA0DVY; Jeany Hess, KC3QND and Pete

Sklenar, KE8NQK; Chet, K8KIZ and Audrey Rogers; Clark Beckman, N8PZD; Tom, N8FDY and Elaine, KC8FOS Wilkinson. We enjoyed good conversation, tasty food, and the presentation of Certificates of Appreciation for contributions to the club. Thanks to Brenda Brooks for submitting some of the banquet photos.







NOARS 2021 in Review

Covid-19 began affecting our lives early in 2020 and continued into 2021.

Membership meetings over Zoom had commenced in April 2020 due to Covid-19. In-person membership meetings resumed in September 2021 and were hybrid, being in-person and broadcast over Zoom from the library's meeting room so those staying home could be at the meetings.

Programs at Membership Meetings

January - Reverse Beacon Network by Bob, W8NNC

February - Ham Radio Review done on Zoom. For anyone who would like to know more.

March - Fox Hunts – Why and How by Bryan, N8OOF

April - Choosing a Radio – Deep Dive by Tom, N8FDY

May - Antennas by Bob, W8NNC; Chet, K8KIZ

June - Magic Fire from the Sky - A Fulminologist Diary by Chet, K8KIZ

July - FCC RF Exposure Rules YouTube video and discussion

September - Antenna Analyzers, Show and Tell by Bob, W8NNC; Tom, N8FDY; Bryan, N8OOF; Tom, K1TRB; Elaine, KC8FOS

October - The Wide World of Radio Sport: The Benefits of Contesting and How to Do It

by Tom, W8KYZ; Pete, KE8NQK; Elaine, KC8FOS

November - Two New Offerings from CompacTenna by Jack Nilsson. Due to technical difficulties the presentation was made the following Monday.

Club Business and News

Amendments to the Bylaws were approved by the membership: Article II Membership - Family Members who are not licensed radio amateurs receive the Associate

Member status at the Family Member rate. Article III Dues - A member shall be stricken from the membership roll if his/her dues are not paid by the adjournment of the membership meeting in January of the membership year.

New and Returning Members: John Dolinar, W8LYO; Mark Fain, KE8DIH; Jeff, WB8PIY; Chuck Mehozonek, K8CVM; Christopher Durkin, KE8MMY; Mark Bailey, N8OHA; James Shuster, KB8FST; Earl Jolley, W8LYY; Corey Brooks, KE8PQW; Dan Bender, KE8OWK; Fred Niehaus, N8CPI; Stephen Kinford, N8WB.

Call Sign changes: Gerald Rutter, KE8PQN becomes WY8F; Tom Miller, W1PDI becomes W1PD.

There continued to be no VE testing as the Red Cross building in Elyria was closed.

Coffee Club, a casual net, started by Dave, KY8OSU and Tom, W8KYZ, began in April.

Virtual Monthly Lunches were held over Zoom through April.

Tom Miller, W1PD operated Winter Field Day

Pete and Jeany became Net Control Stations on Food Group and 2 meter nets

Bryan, N8OOF and Sara, KC8KSU accepted leadership of Fox Hunts, beginning 2022.

Zoom Elmer, held thirty minutes before Zoom Membership Meetings, started in April and ended when in-person meetings resumed in September at the library.

John Dolinar, W8LYO accepted an offer to be a Net Control Station on 10 M.

A dual-stage isolator was installed on the repeater to protect its amplifier.

A new repeater controller, an ARCOM RC210, was installed. The repeater now has AllStar and EchoLink.

Two relay boards were purchased for the YaesuDR2Xes.

Carl, W8KRF formed a Repeater Committee: Carl as chair; Bryan, N8OOF; John, W8LYO; Pete, KE8NQK.

Pete and Jeany joined the Program Committee as well as Carl's invitation to be the Nominating Committee

Became Silent Keys: Don Norman, AF8B; Ron Borkey, K8VJG ; Roger Fell, AB8IF: Bill Hole, AC8FD.

NOARS Log

Tom Miller, W1PD resurrects contest corner for the Log.

Member Highlights; George Ingmand, WA8YVF: Tom Berger, K1TRB: Jeany Hess, KC3QND

Contributions to NOARS Log: Tom, W1PD contest corner; Chet, K8KIZ interesting internet links; Roger, AB8IF technical articles; Clark, N8PZD article about his delta loop antenna; Jeany, KC3QND Hamvention Weekend Activities information from Michael D. Kalter, W8CI, Official Spokesperson for Hamvention 2021; Tom, W8KYZ news articles.

Net Control Stations

Dan Wadsworth, W8AJF; Elaine Wilkinson, KC8FOS; Carl Rimmer, W8KRF; Tom Porter, W8KYZ; John Dolinar, W8LYO; Dave Fisher, KY8OSU; George Ingmand, WA8YVF. George moved out of state in the spring, Dave, KY8OSU did the same in December.

Social Events



Fox Hunts Returned in April, the last one was held September 18

In-person monthly lunches resumed May 4th.

Portable Antennas Show and Tell was held on Zoom May 26.



Field Day June 26 and 27 with Lorain County Amateur Radio Association (LCARA)



NOARSFest was July 17 at LCCC. Thank you to Carl, W8KRF; Tom, W8KYZ; Dan, W8AJF; Ann, KA8ZEP; Pete, KE8NQK; Jeany, KC3QND; Bill, K2WJS; John, W8LYO; and Jim, KE8SAF for all your work to make it a success.

Annual Picnic was held August 16, planned and executed by the Social Committee: Dave, KY8OSU; Ann, KA8ZEP; Elaine, KC8FOS, and many club members who brought tasty food.



NOARS Antenna Day was on October 2 at North Olmsted Park.

Holiday Banquet was December 4 at City Club Restaurant and Lounge. Planned by the Social Committee: Dave, KY8OSU; Ann, KA8ZEP; Elaine, KC8FOS. Thanks to Dan, W8AJF; Clark, N8PZD; Brenda Brooks for their help.

OUR HAM RADIO SHOWROOM IS NOW OPEN!

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 Tom, W8KYZ

Astron RS-12A. 12 amp max/9 amp continuous, 13.8 vdc regulated power supply. \$45.00

Daiwa PS-304. 30 amp max/22 amp continuous DC power supply with V/A meter. Adjustable 9.0-15.0 volts. \$75.00

Panasonic RF-B45 portable radio. ssb/cw/fm/lw/mw/sw. \$50.00

Kenwood MJ-88 microphone adapter. 8 pin round to modulator adapter. \$5.00

Optimus STA-300 digital AM/FM stereo receiver. 15watts per channel. Two Pro-77 bookshelf speakers. \$80.00

17-foot, 7 conductor antenna rotor cable. \$10.00

Larsen antenna coils, gaskets, replacement parts. \$25.00

Flexible 13" operating table lamp, uses 60 watt or less bulb. \$10.00

Flexible 14" operating table lamp, uses 60 watt or less bulb. Clamps onto edge of table. \$10.00

Two-position coax switch. Was \$15.00, now \$10.00

Budwig HQ-2 long-wire end insulators. Pair \$2.00

Power strip SP-6 by Curtis for up to 6 outlets. \$8.00

Belden 15 amp heavy duty 3 conductor 9' extension cord. \$12.00

Contact Tom, W8KYZ. 440-320-5523 or tporter161@oh.rr.com

For Sale by Bill Adams, WD8OSJ

Kenwood TS-940S HF Radio. \$600.00

Kenwood SM-220 Station Monitor. \$150.00

Kenwood TS-570D HF Radio. \$450.00

HealthKit SB-1000 Amplifier. \$800.00

Kenwood SP-820 Noise Cancelling Speaker. \$75.00

Baofeng UV-5R HT with charging station. \$35.00

Yaesu VX-7R HT with power supply. \$100.00

Baofeng UV-50X2 Mobile. \$100.00

Coaxial Dynamics Watt Meter. \$100.00

All equipment is in working order

Contact Bill Adams WD8OSJ @440-522-0022 Text only or E-mail wd8osj@wd8osj.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.

Items for sale by Chris, KD2HCE for KA8IWO SK

The items need to be cleaned and tested.



Two Sharp Both Sides Play record players for vinyl LPs. Currently not working. \$400 each. After repair, will ask for approximately \$600 each.



Kenwood TS-700A transceiver. \$150.



Kenwood TS-520 transceiver. \$200.



Yaesu FT-221. \$200.



Kenwood TS-600 transceiver. \$275 with MC-60 mic.

One generic desk mic equivalent to a Sadelta Echomaster Plus. \$30

One Demon 3-tube 250 amp amplifier.

Contact Chris, KD2HCE@arrl.net and leave a number and callback time.



Heathkit HM-2141 VHF (50-175MHz) meter \$75.



Kenwood TS-700S transceiver. \$275 with MC-60 mic.

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: Dave, KY8OSU
Secretary: Elaine, KC8FOS
Treasurer: Tom, W8KYZ
Others: Bob, W8NNC, 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

NOARS meetings are held the third Monday of each month at 6 PM at the North Ridgeville Library, 35700 Bainbridge Road, North Ridgeville, OH. Donuts and coffee are available. 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

Due to COVID-19, there will be no VE testing until further notice.

Net Control Stations

Carl, W8KRF
Tom, W8KYZ
Dan, W8AJF
Pete, KE8NQK;
Jeany KC3QND
Elaine, KC8FOS
Dave, KY8OSU
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; Dave, KY8OSU; Pete, KE8NQK;
Jeany KC3QND
Social Committee: Elaine, KC8FOS; Dave, KY8OSU;
Ann, KA8ZEP
Public Relations Committee: Dave, KY8OSU;
Elaine, KC8FOS