



The RELAY)))

December
2023



The Official Publication of the Arrowhead Radio Amateur Club

A.R.A.C. Inc.

P.O. Box 7164 Duluth MN 55807-7164

<http://www.thearac.org>

Dues: Member \$20/Family \$25

INDEX

Holiday Gift Ideas	1
Board Mtg Minutes	2
Club Mtg Minutes	4
Prez Sez	6
Testing Sessions	6
CW Abbreviations	7
Band Plan	7
Nets	8
Repeaters	9
Members' Email	11
Calendar	12
Committee Chairs	13
Upcoming Events	14
Contest Calendar	24

Holiday Gift Ideas & Buying Guide 2023 Editors' Pick: Yaesu FTM 500DR

Well it's December again, and so comes our annual **Holiday Gift Ideas & Buying Guide**. This year, you'll find even more items to consider than before, most with free shipping and delivery in plenty of time for Christmas. We also found that many of our past vendors now have Amazon stores, so you'll see considerably more listings sourced there. It's worth remembering that, however we feel about buying on Amazon, 60% of their vendors are actually small and medium business! This is expected to increase, as small town "brick & mortar" business continues to serve their local customers while adding online order capability. Amazon's fulfillment process makes it faster and easier to ship their products to us and keep their companies going for the sake of their employees and their families.

Ok, now we'll present our **2023 Editors' Pick**:

The Yaesu FTM 500DR Dual Band Digital Mobile Transceiver "BigHead".

The FTM-500DR shares the YAESU advanced core features, and utilizes the latest C4FM Digital technology. Yaesu enthusiastically calls this their new flagship mobile radio and lists these extensive features:

- **Acoustic Enhanced Speaker System**
Total 9W Clear & Powerful High-fidelity Audio, delivered by the Front Panel 6W and the Main Unit Internal 3W speakers
- **Innovative, Smart Operating System** with TOUCH&GO / SEARCH&GO / PMG** Functions. **(PMG: Primary Memory Group Monitor)
- **144MHz, 430MHz C4FM Digital / FM / AM** (Air Band Receive)
- **True Dual Band Operation**, C4FM/C4FM Digital D-D Dual Receive
- **Advanced C4FM Digital Mode with AMS** (Automatic Mode Select), DG-ID feature and Smart Navigation
- **2.4-inch High-Resolution Full-Color Touch-panel Display** and Demountable Front Panel Controller
- **Swing-Head Adaptable Front Panel** improves display visibility
- **Single-Touch Spectrum Scope function**
- **High speed Band Scope function**
- **Built-in 66ch High precision GPS receiver** and External GPS device connectivity
- **Wireless Operation Capability** with the **Bluetooth® Headset** - Optional Swing-head Kit (SJKM-500) allows the Flexible angle adjustment of the Front Control Panel
- **Customized Function List (CFL) Display** allows checking and immediately executing priority functions. Up to 8 functions or settings from the set-up menu can be registered.
- **MAG (Memory Auto Grouping) Function** allows Memory channels to be automatically categorized in ALL, AIR band, VHF band, UHF band and OTHER.
- **VFO Band Skip Function**
- **Memory Channel Data Transfer to the VFO Register**
- **Single-Touch Spectrum Scope Function**: Instantly switch the operating screen between "Scope display operation" and "Dual Receive operation" while in MAIN channel operation
- **High speed Band Scope Function** *up to 61 channels centered on the current frequency displayed in VFO mode



- and up to 21 channels of signal information in memory channel mode
- **1104 Memory Channels including 5 "Home" channels**, 50 sets of memories for programmable memory scan and 999 "Basic" memories.
- **1200/9600bps APRS® Data Communication**
- **WiRES-X Portable Digital Node** or HRI-200 Fixed Node capability
- **Voice Recording** of the received and transmitted audio
- **50W Stable High-Power with Heavy Duty Heat Sink and FACC** (Funnel Air-Convection Conductor)
- *Selectable 50W / 25W / 5W
- **Micro SD Card Slot** (up to 32GB)

Supplied Accessories:
DTMF Microphone SSM-85D
Radio unit Mounting Bracket
Control Cable for operation with adjustable front panel mountings
DC Power Cable
Operating Manual

Wow! That's a long list, but this is the hot pick for so many hams this year, that we wanted to share the details. Now on to the Buying Guide on page 15!

The Relay Co-Editors:
Kim & Steve Waller

Kim - KEØNQS Steve - KEØNQT
KEØNQS.mn@gmail.com KEØNQT@gmail.com



WINTER
2023

ARAC Official Website <http://www.thearac.org> 1



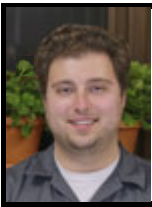
ARAC Board Meeting - November 7, 2023

PRESIDENT



NØVRM
Gene Ellefsen
3710 Chambersburg Ave
Duluth, MN 55811
218-390-3272
Ispitech@mail.com

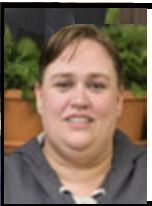
VICE PRESIDENT



KØDJP
David Pyriik

david.pyriik@gmail.com

SECRETARY



KFØGJW
Melinda Nelson

TREASURER



KEØYTM
Sam Frey

ke0ytm@gmail.com

3RD YEAR BOARD



AAØAC
Dave Davis
218-348-6649
aaøac@outlook.com

2ND YEAR BOARD



AAØAW
Doug Nelson

aaøaw@arrl.net

1ST YEAR BOARD



WØDIO
Denny Anderson

Present:

Board Members

Gene Ellefsen – NØVRM, Dave Pyriik – KØDJP, Melinda Nelson – KFØGJW, Dave Davis – AAØAC, Doug Nelson - AAØAW, Sam Frey – KEØYTM

Board Advisors (Non-Board Members)

Randy Wabik – KRØB, Grant Forsyth – KCØWUP

Guest: Mike Lovold – NØPDG, Pulu Dallavia – KCØWDQ, Brett Gibson – KIOV

Meeting called to order by President Gene – NØVRM at 18:30 (6:30 pm)

Minutes:

Minutes were sent via email. Motion to approve Doug Nelson – AAØAW. Seconded by Dave Davis – AAØAC, motion passed.

Treasurer's Report:

Checking:	\$1,922.56
Savings:	\$2,776.73
Repeater:	\$3,320.12
Subtotal Cash	\$8,019.41

Winter CD:	\$1,736.49
Summer CD:	\$0.00
Subtotal CD:	\$1,736.49

Assets Subtotal: \$9,755.90

Our Thanks to
ARAC Treasurer Sam Frey KEØYTM

Motion to accept as presented by Doug Nelson – AAØAW, seconded by Melinda Nelson – KFØGJW, motion passed.

Continued on page 3

ARAC Board Meeting - November 7, 2023

Christmas Party

Motion made by Melinda Nelson – KF0GJW, seconded by Dave Davis – AA0AC to spend \$300.00 for food and \$100.00 for prizes. Motion passed.

Testing:

Had a session last Saturday 11/4/2023 and had a new HAM receive their call on Tuesday 11/7/2023. January 16th is the tentative date for the Tech class testing. As always if you are looking to test or upgrade, or know of anyone that is interested in testing please contact Doug Nelson at AA0AW@arrl.net

Repeater:

[Dave Pyrlík – K0DJP Nothing at this time for the repeaters.](#)

New Business:

December 1 – Bell ringing for the Salvation Army at the Mall Super One Foods from 11:00 am to 7:00 pm.

December meeting will start at 18:00 (6:00 PM). Looking for donations of non-perishable food items.

Motion to adjourn by Melinda Nelson – KF0GJW. Seconded by Sam Frye – KE0YTM, motion passed at 18:52 (6:52 pm)





ARAC Club Meeting Minutes

November 9, 2023

Present:

President: Gene Ellefsen – N0VRM
Treasurer/Membership: Sam Frey – KE0YTM
Secretary: Melinda Nelson – KFOGJW
Second Year Board: Doug Nelson – AA0AW
Special Events: Open/Gene Ellefsen – N0VRM (acting)
Parliamentarian: Grant Forsyth – KC0WUP
Testing: Doug Nelson – AA0AW
Property/Picnic: Scott Ahlgren – N0VYU
HamFest/Education: Bob Schulz – KC0NFB

Absent:

Vice President: Dave Pyrlík – K0DJP
First Year Board: Dennis Anderson – W0DIO
Third Year Board: Dave Davis – AA0AC
Repeater: Dave Pyrlík – K0DJP
Chaplin:
Web Site: Thomas Dorr – KE0RHA
Newsletter/Historian: Kim Waller – KE0NQS
Newsletter/Historian: Steve Waller – KE0NQT

Meeting called to order at 19:00 (7:00 PM) by President Gene Ellefsen – N0VRM. Forty-five (45) members were in attendance.

Minutes:

Minutes are posted on the website and in the newsletter. Motion to accept by Bruce Carlson – KN0NUL, seconded by Justin Cheever – KD9VKi. Motion Passed.

Treasurer's Report:

Checking:	\$1,922.56
Savings:	\$2,776.73
Repeater:	\$3,320.12
Subtotal Cash	\$8,019.41

Winter CD:	\$1,736.49
Summer CD:	\$0.00
Subtotal CD:	\$1,736.49

Assets Subtotal: \$9,755.90

Motion to accept as presented by Bob Schulz – KC0NFB, seconded by Jeff Nast – KC0MKS, motion passed.

Motion made by board to spend \$300.00 for food and \$100.00 for prizes for the Christmas Party. Motion to accept by Bob Schulz – KC0NFB, seconded by John Cavanaugh – KC0AFE. Motion passed.

Continued on Page 5





ARAC Club Meeting Minutes, cont.

Nominations:

President: Gene Ellefson – N0VRM (Motion to close Bob Schulz – KC0NFB, seconded by Justin Cheever – KD9VKI)

Vice President: Dave Pyrlik – K0DJP (Motion to close John Cavanaugh – KC0AFE, seconded by Justin Cheever – KD9VKI)

Secretary: Melinda Nelson – KF0GJW (Motion to close Mike Lovold – N0PDG, seconded by Paul Gilsdorf – KF0GEX)

Treasurer/Membership: Sam Frey – KE0YTM (Motion to close Bob Schulz – KC0NFB, seconded by Jeff Nast – KC0MKS)

First Year Board: Dave Davis – AA0AC, Justin Cheever – KD9VKI, Brian Beckman – KF0LFZ (Motion to close Diane Saunders – K0DSL, seconded by Sam Frey – KE0YTM)

Education:

Bob Schulz – KC0NFB. There are currently 11 students in class. The end of this class session is January 16, 2024. Possible General Class coming up.

Testing:

Doug Nelson – AA0AW. Had a little test session a couple of Saturdays ago. We had 5 candidates that were tested. 2 successful tests and an upgrade to General. As always if you are looking to test or upgrade, or know of anyone that is interested in testing please contact Doug Nelson at AA0AW@arrl.net

Repeater:

Dave Pyrlik – K0DJP report on Mahtowa. Pulled out old equipment. Installed new equipment, cleaned up the building. As of today, we do not have a date for the linking. The repeater should get a good workout this weekend with the MS150. The property will need the grass cut and cleaned up some.

Gene Ellefson and Randy Wabik had a meeting on Monday with John Panzer from WDSE. As of right now WDSE does not have any scheduled tower work for this year. There was discussion about changing the feed line and John says that should not be an issue.

New Business:

December meeting will be at 6:00 PM.

December 1st will be the Salvation Army bell ringing at the Mall Super One Foods from 11:00AM to 7:00PM.

Silent Key: (Please keep their family in your thoughts)

Door Prize was won by William Turk – KF0ILA.

Motion to adjourn by Bob Schulz – KC0NFB, seconded by Justin Cheever – KD9VKI, motion passed at 19:21 (7:21 PM).

CLUB REPEATER

WØGKP

146.94 (-)

CTCSS TONE

103.5



Prez Sez...

HO HO HO MERRY CHRISTMAS!

We have a lot happening at our Club meeting on **December 14th**. The meeting will start at 6:00 PM. This is our Christmas Party so the Club will provide some Meat and Cheese trays. It is also a Potluck, so bring your favorite dish to share.

Election of Officers and the presentation of the **Thomas Reibold W9IBM Award** will take place at the meeting. We are having a Raffle for a Yaesu FT 70 DR Hand Held Radio and tickets are \$1.00. The drawing will be held at this meeting.

This is the time of the year we collect non-perishable food donations for the Salvation Army food shelf, so please consider contributing items at our Christmas gathering for families in need.

Hope you all have a Merry Christmas!!

Gene Ellefsen NØVRM



LOOKING for an **Amateur Radio License TESTING SESSION?**

Schedule your own Testing Session TODAY!

Contact *Doug Nelson-AA0AW* at aa0aw@arrl.net or 218-391-5874

All Exam Candidates are REQUIRED to have an FCC Registration Number (FRN) before exam day, which will require your email address.

Not Currently Licensed? For New License Candidate FRN registration, go to: www.fcc.gov/new-users-guide-getting-started-universal-licensing-system-uls

Upgrading to General or Expert Class & not sure you have an FRN number?
go to

<https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp>

UPGRADE CANDIDATES:

Please bring a copy of your current license to the exam session.

CW Abbreviations

- | | | | |
|--------------------------|-------------------|--------------------------|-------------------|
| AR End of Message | AS Pse QRX | BK Back to You | SK End of Contact |
| TU Thank You | PSE Please | K Invite to Transmit | |
| QST Calling all Amateurs | QRL Are You Busy? | QRU Have anything for me | |
| QRV Are You Ready? | QRX Standby | QRS Transit Slower | |

A	●■■■	M	■■■■	Y	■■■■●
B	■■■■●	N	■■■●	Z	■■■■●●
C	■■■■●●	O	■■■■■	1	●■■■■■
D	■■■■●●●	P	■■■■●●	2	●●■■■■■
E	●	Q	■■■■■●	3	●●●■■■■
F	●●■■■	R	■■■■●●●	4	●●●●■■■
G	■■■■●●	S	■■■■●●●	5	●●●●●■■
H	●●●■■■	T	■■■■●	6	■■■■●●●●
I	●●	U	■■■■●●	7	■■■■●●●●●
J	■■■■■●	V	●●■■■■	8	■■■■●●●●●
K	■■■■●●●	W	■■■■●●●●	9	■■■■●●●●●●
L	■■■■●●●●	X	■■■■●●●●●	0	■■■■●●●●●●

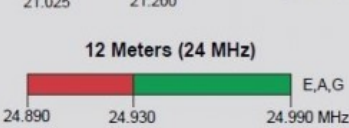
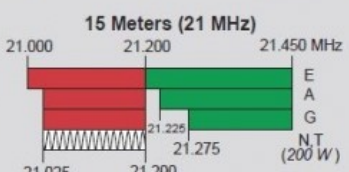
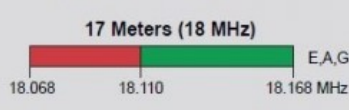
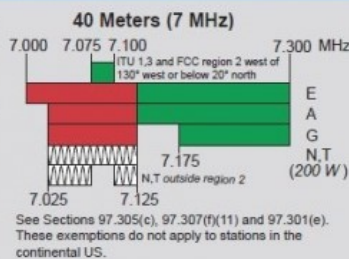
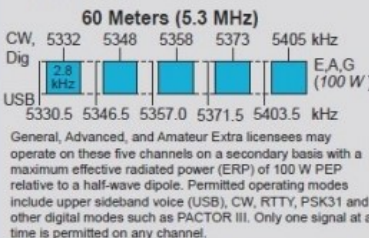
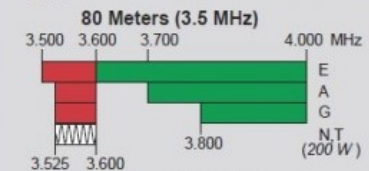
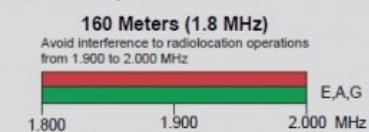
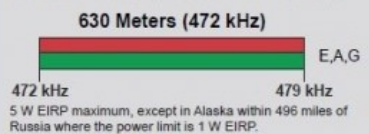
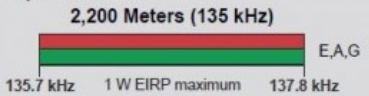


US Amateur Radio Bands

US AMATEUR POWER LIMITS

FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

On March 28, 2017, the Federal Communications Commission adopted rules that will allow Amateur Radio access to 472-479 kHz (630 meters) and to 135.7-137.8 kHz (2,200 meters). However, amateurs cannot use these frequencies until 30 days after the Report and Order is published in the Federal Register and the final procedures for registering stations with the Utilities Telecom Council (UTC) have been approved and announced. At the time this chart was created, the Report and Order had not been published and the UTC online registration site is not yet available. Follow ARRL news for further information. New charts will be published at www.arrl.org/graphical-frequency-allocations when the bands are fully available for use.



Effective Date for
2,200 and 630 Meters
to be announced



ARRL The national association for AMATEUR RADIO

KEY

Note: CW operation is permitted throughout all amateur bands.

MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.

Test transmissions are authorized above 51 MHz, except for 219-220 MHz

- = RTTY and data
- = phone and image
- = CW only
- = SSB phone
- = USB phone, CW, RTTY, and data
- = Fixed digital message forwarding systems only

- E = Amateur Extra
- A = Advanced
- G = General
- T = Technician
- N = Novice

See ARRLWeb at www.arrl.org for detailed band plans.

ARRL We're At Your Service

ARRL Headquarters:
860-594-0200 (Fax 860-594-0259)
email: hq@arrl.org

Publication Orders:
www.arrl.org/shop
Toll-Free 1-888-277-5289 (860-594-0355)
email: orders@arrl.org

Membership/Circulation Desk:
www.arrl.org/membership
Toll-Free 1-888-277-5289 (860-594-0338)
email: membership@arrl.org

Getting Started in Amateur Radio:
Toll-Free 1-800-326-3942 (860-594-0355)
email: news@arrl.org

Exams: 860-594-0300 email: vec@arrl.org

NETS

Have a favorite HF/6m/2m/1.25m/70cm net that you check into or listen in on? Also, please send corrections and we will add it to the list below - Kim KEØNQS at my email KEØNQS.mn@gmail.com.

- **Northland Weather Group Net:** Mondays 2000 on the ARAC repeater (146.940 MHz with a tone of 103.5 and standard offset).
- **Minnesota D-Star Net:** Sundays at 19:30 on Reflector 53A
- **Minnesota Section Net** 1200 and 1730 on 3.860 [Net Manager: NØYR] http://www.mn-section.org/dept_stm.html
- The non-non-net: Evenings 2000 144.200 USB except for Sunday evenings.
- Badger WX Net: 0500-0715 on 3.985. Give 24 hour high/low/current temperature, precipitation and snowfall.
- **PICONET:** 3.925 from 0900-1100 CT Mon-Sat and 1600-1700 CT Mon-Fri. Info at: <http://www.piconet3925.com>
- Michigan Upper Peninsula Net: 1600 (CST) on 3.921 MHz Sun-Sat and 1200 Sun. Info: <http://www.michupnet.com>
- Great Lakes Marine/Maritime Mobile Net: Morning 07:30 - 3.932; 08:15 - 7.261 MHz and evening 18:30 - 3.1730927; 19:15 - 7.268 MHz. Weekend extra net: 10:00 - 7.261/7.268 MHz. All CST, LSB and +/- QRM. See: <http://www.sailblogs.com/member/glimmnet/>
- MIDCARS: 07:30-13:00 - 7.258 MHz. See: <http://www.midcars.net>
- Iowa snowbird net on 14.257MHz, M-W-F at 10:00 am Local Time. This is an open net.
- Spider Web Net (Marco Island FL) on 14.347 every morning at 0730 CST/CDT: <http://www.spiderwebnet.net>
- Maritime Mobile Service Network: Daily at 1100—2100 Central on 14.300. <http://mmsn.org> and <http://www.14300.net>
- RV Radio Network: Every day at 1900 Central on 7.265 MHz. Web site: <http://www.rvradionetwork.com>
- Upper Midwest Ten Meter Net: Every Thursday Evening @ 8 PM – 28.480 MHz USB
- Wisconsin Sideband Net: Daily @ 5:15 PM – 3985 [or 3982.5] KHz LSB
- Hobby Helpers Net - Tuesday @ 8 PM – 28.330 MHz USB (Isanti MN) LSB [Net Manager: WOØA].
- Northstar Trader Net: 3.908 +/- at 0830 CST Sundays
- WARFA: 3.908 +/- Sun/Tue/Thu nights at 2200 CST, <http://warfa.org/>
- Youth Net: 14.320-14330 Sundays 1800-1900 UTC, Net Control: AC8PI
- YACHT: Saturdays 1900 CST on EchoLink #481872, <http://yachthams.webstarts.com>
- Northwestern Ontario ARES Net: Evenings at 20:15 (Central) on +/- 3.750Mhz
- The Iron Range Net: Saturdays at 0800 Central time on or near 3.919 Mhz. Look them up on Facebook!
- FORX Net: Mondays at 1900 Central at 3.941 Mhz +/- QRM. WAØJXT — Grand Forks, North Dakota
- HF CW: Fridays 08:00 CST, 7.112 MHz. Informal slow speed CW Net. W8IRT NCS. Email: w8irt@aol.com
- Minnesota ARES Digital Net: Thursdays at 2000 CST, 3.5835 MHz USB +/- QRM, Mode: Olivia 8/500.
- SARA Digital Net: Sundays at 1900 Local, 3.582.150 MHz USB +/- QRM, Mode: BPSK31/BPSK63
- Spider Web Net (Marco Island FL): 14.347 every morning at 0730 CST/CDT: <http://www.spiderwebnet.net>
- Broadcaster Net: 7.231 or 3.855 M/W/F @ 1500 UTC. 14.255 M-F @ 2130 UTC. <http://www.cbsretirees.com/ham.htm>
- Old Military Radio Net: 7.268 +/- nightly at 0200z. Other times/Frequencies too. See: <http://www.mrca.ar88.net/>
- Rag Chew Crew/Tailgaters/Freewheelers Nets: 3.916 +/- nightly at 1900 CST, <http://www.tailgatersnet.com>
- North South Net: 7.214.6 +/- at 0700 CST, Monday-Saturday



DULUTH AREA REPEATERS

ARAC System WØGKP

Frequency	Offset	Tone	Location
146.940	minus	103.5	Duluth
146.940	minus	107.2	Lakeside (recv)
146.940	minus	151.4	Two Harbors (recv)
146.940	minus	100.0	Gary-New Duluth (recv)
146.940	minus	110.9	Cloquet (recv)
147.000	minus	103.5	Mahtowa
444.100	plus 103.5		Duluth UHF Link

N9MMU/N9QWH System (WI)

145.310	minus	110.9	Duluth
145.490	minus	110.9	Solon Springs
147.255	plus 110.9		Hayward
145.110	minus	110.9	Rice Lake
147.345	minus	136.5	Holcombe
145.230	minus	110.9	Eau Claire

WECOMM – WI Statewide Linked System WE9COM

147.075	plus 110.9		Meteor Hill (closest repeater to Duluth)
---------	------------	--	---

LSAC System # 1

147.330	plus 151.4		Proctor
147.330	plus 103.5		Duluth (recv for Proctor)
147.270	plus 114.8		Two Harbors
147.270	plus 103.5		Wales
147.090	plus 114.8		Silver Bay
145.410	minus	114.8	Finland
147.300	plus 114.8		Isabella
145.150	minus	103.5	Washburn, WI
146.700	minus	103.5	Bayfield, WI
443.850	+5.00	none	Bayfield, WI
147.165	plus 110.9		Hurley, WI
146.640	minus	151.4	Ely
443.500	+5.00	141.3	Gilbert
147.060	plus 103.5		Virginia
147.360	plus 162.2		Cook
147.165	plus 114.8		Coleraine
443.925	+5.00	110.9	Brainerd
443.200	+5.00	114.8	Tamarack
147.360	plus 203.5		Aitkin
146.865	minus	146.2	Giese
147.570	simplex	146.2	Hinckley
444.575	+5.00	146.2	Hinckley
443.325	+5.00	146.2	Isanti



DULUTH AREA REPEATERS, continued

NARC System NAØRC

147.135 plus 103.5 Knife River
 145.450 minus 114.8 Park Point (rcv)
 147.135 plus 114.8 Knife River - Park Point (rcv)

Stand Alone Repeaters

145.210 minus 110.9 Clam Lake, WI
 146.880 minus 123.0 Grand Rapids, MN
 146.910 minus 146.2 Duxbury, MN
 146.955 minus 146.2 Askov, MN
 147.105 plus 110.9 Chaffey, WI
 444.850 +5.00 141.3 Cloquet, MN

Fusion

Fusion (Analog has tone and C4FM digital with no tone)

147.150 plus 151.4 NTØB Gilbert, MN Fusion Repeater
 145.170 minus 110.9 WA9KLM Superior, WI – Douglas County RACES/ARES Fusion Repeater (Digital only) Fusion Room 28373

145.250 minus 103.5 KBØYHX Cloquet, MN – Carlton County RACES/ARES Fusion Repeater

444.300 +5.00 103.5 NØEO Duluth, MN – Spirit Valley Amateurs Fusion Repeater WIRES-X NØEO (Analog only) Fusion Room 40494

444.400 +5.00 103.5 NAØRC Knife River, MN – Wires X Connected to NØEO Room 40494
 444.500 +5.00 103.5 NØLCR Two Harbors, MN – Wires X Connected to NØEO Room 40494
 444.600 +5.00 103.5 NØLCR Silver Bay, MN – Wires X Connected to NØEO Room 40494
 444.800 +5.00 103.5 NØLCR Grand Marais, MN – Wires X Connected to NØEO Room 40494

D-Star

147.375 plus NØEO D Star
 442.200 plus NØEO D Star

Rev. KCØWDQ as of 10/1/22 For ARAC Newsletter

Elmers

El-mer / el-mər/ [el-mer]

1. a male given name: from Old English words meaning "noble" and "famous."
2. an adhesive used to bond like or unlike materials
3. An experienced ham radio operator who mentors new and prospective hams.

Name	Call Sign	Expertise
Jeff Nast	KCØMKS	APRS, EchoLink, WinLink, Fusion, Contesting
Bob Schulz	KCØNFB	Contesting
Jim Anderson	NØJWA	QsoNet
Doug Nelson	AAØAW	HF, VHF/UHF, Contesting, Packet, APRS, Morse Code, VE testing, Echolink, Allstar, EmCom...

Membership E-mail Directory

Ahlgren, Scott NØVYU
sahlgren01@msn.com
Anderson, Jim NØJWA
kcØmko@centurylink.net
Anway, Allen KC9LJN
allen@a2d2.com
Bakke, Richard KDØQHE
rabakke46@aol.com
Barnes, Ray KEØZN
KEØZN@outdrs.net
Blodgett, Warren KDØXI
kdØxi@aol.com
Blotti, Nick KBØMHD
NickBlotti@hotmail.com
Bockbrader, Jonah KEØCXD
j@pelirrojo.ninja
Bockbrader, Rollie KBØCK
Rollie.bockbrader@q.com
Clemens, Butch KBØSMG
kbØsmg@2z.net
Currier, Barb
bjcurrier@peoplepc.com
Dall, Jim WDØGVW
Dall, Teresa KAØCDO
wdØgvw@gmail.com
Dallavia, Paul KCØWDQ
kcØwdq@yahoo.com
Daly, Ed KØYMF
eddalymn@aol.com
Ellefsen, Gene NØVRM
lspitech@mail.com
Ferch, Tim AKØTF
akØtf@aol.com
Ferguson, Tom WBØDHB
tferg5@msn.com
Fleischman, Bill KCØZZL
wfleisch@d.umn.edu
Forsyth, Grant KCØWUP
forsythgrantc@gmail.com
Frederick, Jerry NØBNG
nØbng@mchsi.com
Frederick, Julie NØPIE
jfreds@mchsi.com
Frey, Sam KEØYTM
keØytm@gmail.com
Gibbs, Rex NØKXT
nØkxt@yahoo.com
Gilsdorf, Paul KFØGEX
paul.gilsdorf@icloud.com
Godbout, Med WØEEZ
wØeezmedgodbout@centurytel.net
Gordon, Fritz KD9BEW
wizzard7@hushmail.com
Hanson, Gary NUØW
captaingary@chartermi.net
Harstad, Ben KEØJDB
coast_guard_aux_duluth@yahoo.com
Hawkinson, Garry WØELH
garryhawkinson@yahoo.com

Hegrenes, Bruce KØOE
Hegrenes@charter.com
Jakubek, Patrick KDØSGK
kdØsgk@gmail.com
Johnson, Randy AAØME
randy@nsw4x4.com
Leslie, Shirl KBØSBM
dsleslie@centurytel.net
Maida, Tom KFØALP
tmaida@outlook.com
Makowski, Cletus KBØLBS
kbØlbs52@msn.com
Makowski, Karen NØWEZ
k-wez1@hotmail.com
Marchetti, Jim KEØLHX
KEØLHX@outlook.com
Mattson, Bing KCØKRA
, Kathy KCØTIV
HamToHam@msn.com
McCorison, Derek WØDNF
derek1Ø68@hotmail.com
Meese, Joe WØLWU
rxcpd@yahoo.com
Miller, Dave WØNWO
dmiller@nwoutlet.com
Mullozzi, Anthony (Nick)
AJ KDØYQA
Ben KDØYPZ
Joe KDØYQB
KDØYQC
amullozzi@hotmail.com
Murray, Edwin W1ELM
w1elm@arrl.net
Nast, Jeffrey KCØMKS
kcØmks@gmail.com
Nelson, Doug AAØAW
aaØaw@chartermi.net
Nelson, Glen KAØGGG
mgnelsonØ1@gmail.com
Nelson, John KBØSUW
jon275@q.com
Nordin, Al WBØDBQ
anordin@aol.com
Olson, Lloyd Jr. KC9JTC
kc9jtc@yahoo.com
Pearson, Wayne WØKRH
meppsy@netzero.net
Pettit, Kathy KCØYVM
kcØyvm@gmail.com
Pomroy, Deb KCØUKC
dpomroy@d.umn.edu
Pyrlik, David KØDJP
David.pyrlik@gmail.com
Reger, Bernard KB9KQZ
Mike KB9KRA
Brian KB9KUX
Chris KB9WJQ
bjr5488@yahoo.com

Contact Kim or Steve Waller to include your name in this listing!

Contact Kim or Steve Waller to include your name in this listing!

Rosell, Dawson KEØHEL
rosel032@d.umn.edu
Saunders, Diane KØDSL
kØdslae@gmail.com
Scholz, Greg KDØUYN
kdØuyn@gmail.com
Schreyer, Dave WAØAWZ
waØawz@gmail.com
Schulz, Robert KCØNFB
kcØnfb@charter.net
Snyders, Mark ACØLE
snyds1118@msn.com
Stark, John KCØYVH
johnvinyl@yahoo.com
Swanson, Scott N9DMG
sswanson6749@charter.net
Waller, Kim KEØNQS
keØnqs.mn@gmail.com
Waller, Steve KEØNQT
keØnqt@gmail.com
Whelan, Jacqui KBØJIM
cndymx@gmail.com
Whelan, John KØJRW
jr-whelan@hotmail.com
Winterscheidt, Heinz KD6FSA
alter.skipper@gmail.com
Wulf Gar WU1FGR
wu1fgr.ham@gmail.com

Members, please check your name and email address for accuracy. If you are not on this list and want to be on the list, contact us with your info. If you need to make a change, please let us know at KEØNQS.mn@gmail.com OR KEØNQT@gmail.com



DECEMBER

CLUB EVENTS

SUNDAY NIGHT NETS

1930 - CW - 28.125 MHz USB-CW
 2000 - USB 28.450 MHz
 2100 - Southern St. Louis County
 Emergency Services Net

MONDAY NIGHT NETS

2000 - Northland WX Net - ARAC Repeater

TUESDAY NIGHT NETS

2000 - Douglas Cty 145.490 MHz
 2030 - Central Carlton County

WEDNESDAY NIGHT NETS

1900 - Lake County - LSAC1
 2nd & 4th Wednesdays
 2100 - BWAR

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3 CW 1930 N0PDG USB 2000 AA0AW ES 2100 KC0WDQ	4 WX 2000 KC0MKS	5 ARAC BOARD MEETING Sammy's Pizza 6:30 pm DC Net 2000 CC Net 2030	6 2100 - BWAR	7	8	9
10 CW 1930 AA0AW USB 2000 KB9WLB ES 2100 W0NWO	11 DC ARES/ RACES Mtg 1900 DC EOC WX 2000 KC0MKS	12 DC Net 2000 CC Net 2030	13 Lake County ARES/RACES Meeting 1800 Lake County Net 1900 2100 - BWAR	14 	15	16
17 CW 1930 N0PDG USB 2000 K9KDK ES 2100 N0VRM	18 WX 2000 KC0MKS	19 DC Net 2000 CC Net 2030	20 St Louis County ARES/RACES Meeting 1800 2100 - BWAR	21	22	23
24 CW 1930 AA0AW USB 2000 N0VRM ES 2100 KE0YTM	25 MERRY CHRISTMAS! 	26 DC Net 2000 CC Net 2030	27 Lake County Net 1900	28 Carlton County ARES/RACES Meeting 1900 CC EOC	29	30 ARAC Club Breakfast The Chalet 8 am
31 CW 1930 N0PDG USB 2000 N0PDG ES 2100 AA0AW						

Get this newsletter *faster*
via email!

Email Doug AAØAW at
aa0aw@arrl.net

Next Club Meeting/Christmas Party:
Thursday,
December 14th, 2023 - 6 pm
at the Coppertop Church!

ARAC Committee Chairs



Club License Trustee:

Ray Barnes KEØZN

Control Operators:

AAØAW - NØKXT - KCØNFB

Newsletter/Historian:

Kim KEØNQS & Steve KEØNQT
Waller

Education Chair:

Bob Schulz KCØNFB

Hamfest Chair:

Bob Schulz KCØNFB

Chaplain:

Rollie Bockbader KBØCK

Visiting Chaplain:

Parliamentarian:

Grant Forsyth KCØWUP

Website:

Thomas Dorr KEØRHA

Membership:

Sam Frey KEØYTM

Property Chair:

Scott Ahlgren NØVYU

Testing:

Doug Nelson AAØAW

Field Day:

Picnic Chair:

Scott Ahlgren, NØVYU

Repeater Chairs:

Randy Haglin NØBZZ
Randy Wabik KAØJZV

Contest Calendar at www.contestcalendar.com

National Contest Journal at www.ncjweb.com

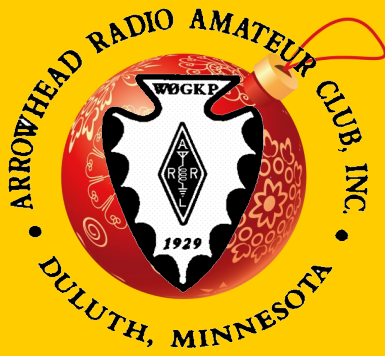
QSO Party Note: State/Province/National QSO Parties are abbreviated with the 2 or 3 letter abbreviation for the state/province/national designation followed by QP for QSO Party:

Examples: Minnesota QSO Party is MNQP
British Columbia QSO Party = BCQP

QRZ web site at www.qrz.com

VHF Propagation site at www.aprs.mountainlake.k12.mn.us

Reminder: The Contest Corral monthly listing of contests can be found in each issue of QST. ARRL sponsored contests can be found in Contest Corral, highlighted, or on the ARRL's web site at arrl.org.



ARAC CHRISTMAS PARTY

Thursday, December 14, 2023
@ 6:00 p.m.
at the Coppertop Church!



POTLUCK

Please bring your favorite dish to share!

The Club will provide meat & cheese trays

RAFFLE

Yaesu FT 70 DR
Hand Held Radio!
Tickets—\$1.00

Thomas Reibold
W9IBM Award



DOING
THE MOST
GOOD



Don't forget to bring **non-perishable food items** for the **Salvation Army Food Shelf** to share with families in need this holiday season!



HOLIDAY GIFT IDEAS & BUYING GUIDE

RADIOS & Equipment



Editors' Pick!

Yaesu FTM-500DR 50W C4FM/FM 144/430MHz Dual Band Digital Mobile Transceiver. Acoustic Enhanced Dual Speaker System. Total 9W Clear & Powerful High-fidelity Audio, delivered by the Front Panel 6W and the Main Unit Internal 3W speakers. Smart Operating System with TOUCH&GO/SEARCH&GO/Primary Memory Group Functions **\$499.95** at DXengineering.com

DVMega Cast Multimedia IP Radio

Based on standard DVMEGA AMBE3000 shield for DMR, D-Star and Fusion. Powerful 3W enclosed speaker and according amplifier. Rotary encoder and 2.4" touchscreen for operation. Quick menu is accessible via mic buttons. Host system is based on Nano-PI with PI-Star pre-installed. Power supply and handheld mic sold separately.

\$399.95 at GigaParts.com



Icom IC-9700 ALL MODE TRANSCEIVER

The IC-9700 is an all mode Tri-band transceiver, covering 2 m, 70 cm, and 23 cm. In addition to the traditional SSB, AM, FM, CW, and RTTY modes, the transceiver also incorporates D-STAR (Digital Smart Technology for Amateur Radio) DV and DD modes. A full featured Satellite mode is built-in! There are three antenna connectors, one each for 144, 430/440, and 1200 MHz. High-Speed Real-Time Spectrum Scope, Waterfall Display, and Built-in 1200 MHz!

Direct Sampling Brought to the VHF/UHF World Built with the VHF/UHF weak signal operator in mind, the IC-9700 is an RF direct sampling receiver for 2m and 70cm. The IF receiver consists of a single, down conversion for 23cm that is between 311 – 371MHz. This design provides a quiet receiver due to Icom's DSP technology. The robust PA provides 100W on 2m, 75W on 70cm, and 10W on 23cm.

\$1,749.95 at GigaParts.com



YAESU VX-6R Multi-Band

2M/70CM 5W and 220 1.5W HT

Heavy duty submersible transceiver

Emergency Automatic ID (EAI) that transmits your callsign & engages mic

\$249.95 at GigaParts.com

Diamond SRH77CA Dual Band HT/Scanner Antenna

High quality, high gain + receive up to 900 MHz HT antenna. Increase the performance on your handheld or wideband scanner with a Diamond® SRH Series antenna.

\$24.99 at Amazon.com



MFJ-9340K, QRP CUB CW TRANSCEIVER KIT, 40 METER

Designed by QRP-ARCI hall-of-famer K1BQT for real world low power operating conditions. All SMT parts mounted & soldered. Just insert and solder through-hole parts (connectors, inductors & trimmer caps/pots). Also available in 80, 30, 20, 17, or 15 Meters

\$119.95 at MFJenterprises.com



Elgato Stream Deck 15 button

Control and automate your ham radio station using an Elgato Stream Deck device.

Simply connects to a computer via a USB port. No additional power requirements. With Elgato's free software, create shortcuts and macros that allow Stream Deck to control the computer, connected hardware or software.

Keys are backed by full color LCD graphic displays. Users can customize JPGs or animated GIFs on the key faces to represent functions or software.

No special formatting or specific resolutions for the images or animated GIFs. Plug-ins allow the animation to represent everything from audio levels, clocks, current weather info (as a weather graphic) and more.

\$149.99 at Amazon.com



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

SIGNS & PLAQUES



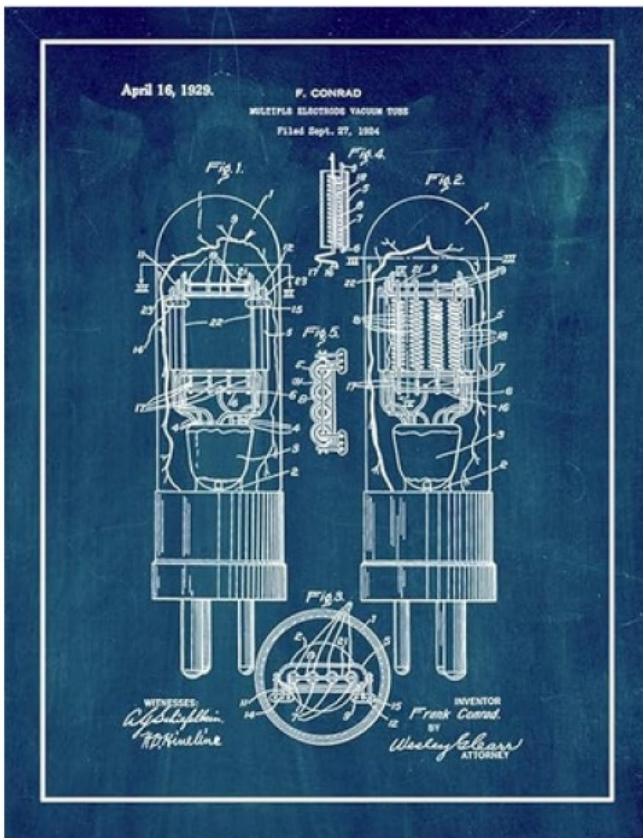
Plastic "Warning" Sign,
Available in 3 sizes:
10"x10" - \$11.99, 12"x12" -
\$14.99, and 14"x14" - \$19.99
Order from Amazon.com



MEOU Aluminum Sign, 12"x8"
\$13.99 at Amazon.com



CUSTOM Call Sign Metal Sign
optional LED backlighting with multiple color choices
and remote, for an additional \$9.99
18" Black Metal Shown, \$69.98. Other Sizes: 8" - \$29.99,
12" - \$48.98, 14" - \$56.98, 24" - \$102.98, 28" - \$164.98,
30" - \$199.95, 32" - \$209.98
9 additional metal colors available; just add \$5 upcharge
for each size of black metal price. Order at Amazon.com



Multiple Electrode Vacuum Tube Patent Print

Shown here in Midnight Blue, this 16"x20" poster is a print of an original 1929 patent drawing. Available in 10 sizes and 8 background color choices. Price ranges from \$12.95 - \$44.95. This example \$25.95 at Amazon.com



MFJ 115 Deluxe World Map 24 Hour Quartz

Set this clock to GMT and you'll know what time it is in designated areas of the world at any time of the day. Premiere cities outline the trim of this 12" clock. Each city has a + or - number from GMT. Simply add or subtract to know the time in each city.
\$29.99 at MFJenterprises.com

Continued on Page 17



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

SIGNS & PLAQUES



6" EZ Stick Call Sign Decal
Great for vehicle windows!
Custom made at **\$4.99 each**
Order from Amazon.com



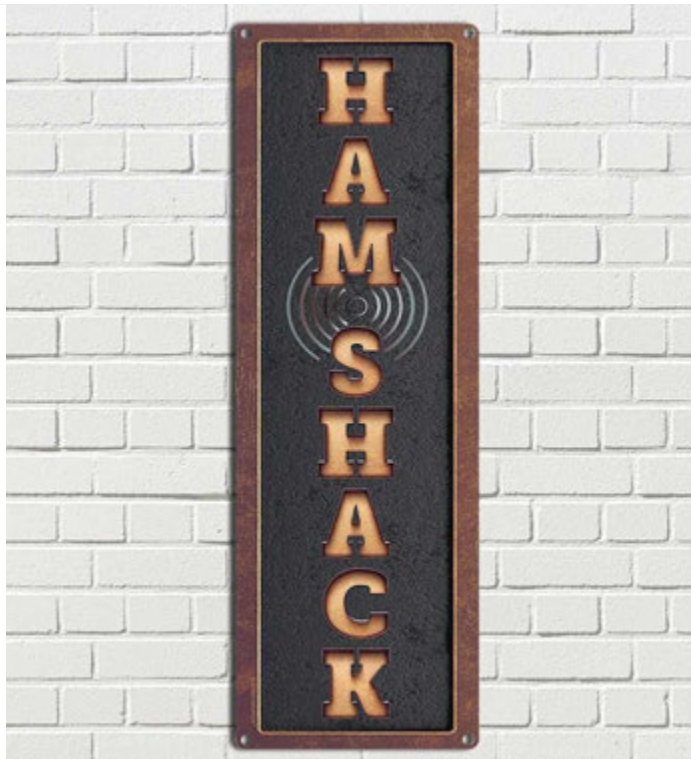
Phonetic Alphabet Metal Sign, 12"X8" \$13.99 at Amazon.com



Hosala Brand "Radio Active" Decals

The perfect sticker for your laptop, water bottle, smartphone case, notebook, skateboard, snowboard, car, windows, mirrors, painted wood, metal or any smooth surface. This 3-pack is printed on a 3"x4" template with spacing between, so decals are slightly smaller than template size.

\$10.55 per 3-pack at Amazon.com



Alamazookie Brand Ham Shack Wall Sign

Shown here in the large 11.5"x31" format, this Ham Shack sign comes in 3 sizes and 2 finishes. Pricing ranges from \$21.99 - \$106.99. This example is **\$96.99 at Amazon.com**



7"x9" Amateur Radio FCC License Plaque

Available in 5 frame/colored faceplate combos as follows: black frame with black faceplate (shown above), black frame with silver faceplate, mahogany frame with gold faceplate, walnut frame with black faceplate, oak frame with black faceplate Ham Crazy brand, all styles **\$30.90 at Amazon.com**



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

APPAREL



"HAM RADIO LENGEND" Vintage-look Hats
Embroidered Cotton Twill, One Size, 3 Colors

\$29.99 each at [Amazon.com](#)



Men's Tee, Sizes S-3XL
Women's Tee, XS-3XL
7 colors: baby blue, slate grey, white, silver grey, grass green, heather grey, pink, All size are **\$15.91** at [Amazon.com](#)



Proud to be the 0.2% Tee
Men, Women, Youth, All sizes
\$21.97 at [Amazon.com](#)



"I Think Therefore I Ham"
16"x16" tote by Awesome Ham Radio Gifts Brand
\$18.99 at [Amazon.com](#)



Ham Radio Christmas Sweatshirt
3 Colors, S-2XL
\$31.95 at [Amazon.com](#)



Chakrata brand hat
choice of 4 colors
\$13.99 at [Amazon.com](#)

Sweatshirt from Patriotic Amateur Radio Designs Company, shown in navy blue.

5 Colors: black, navy blue, dark heather grey, heather grey, royal blue. Unisex sizes S-2XL

All Sizes **\$19** at [Amazon.com](#)



"Ham Radio Grandpa" BBQ Apron
100% cotton, 28"Wx30"L with split front pocket
\$27.95 at [Amazon.com](#)



Modena Brand Stars & Stripes Scarf, \$20.00 at [Amazon.com](#)

Continued on Page 19



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

Accessories



“Proud to be Part of the .2%”
Pop Socket grip for phones & tablets, **\$14.99** at Amazon.com



Mini CW Keyer

Great Design! Mini Keyer bottom is equipped with 4 silicone foot pads to increase friction, stable and comfortable feel, prevent slipping, and prevent scratching tables and equipment surfaces.

Electrical bond is made of high quality 6061T6 aluminum alloy material. Surface is a sandwiched, oxygen-yang treated, and corrosion resistant. CNC processing, duplicate accuracy can reach 0.02mm. Available in 5 colors.

\$35.99 from Amazon.com

Drinkware



“I Think Therefore I Ham”
or
“Hams Do It ‘Til It Hertz”
Stemless Wine Glass
\$18.95 each at Amazon.com

“Best Dad Ever” Vprintes brand
17 oz stainless steel bullet tumbler.
Also available as: Best Brother,
Best Bonus Dad and Best Grandpa
\$26.95 from Amazon.com



Personalized “Amateur Radio Knowledge / I'm Radio-Active” (front & back shown) 20 oz Insulated Cup with Lid. From So Many Pets brand **\$24.99** at Amazon.com



Phonetic Alpha “COFFEE”
11 oz Mug by Mugpedia
\$8.99 at Amazon.com



“Radio-Active” Mug
11 oz by Todolia brand
\$13.99 at Amazon.com



Bubble Hugs brand “ON AIR”
Oversized 15 oz Mug
\$16.99 at Amazon.com



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

MORE FUN GIFT IDEAS ...



NAT GEO Geodes Kit
Great Family Activity!
Break Open 10 Premium Geodes. STEM science kit includes Goggles and Display Stands.

\$29.99 at Amazon.com



Victorinox Swiss Army Knife Personalized Huntsman Model

Huntsman style Swiss Army Knife has 15 functions:

- Corkscrew
- Multipurpose hook
- Key ring
- Can opener
- Screwdriver 3 mm
- Scissors
- Bottle opener
- Wire stripper
- Toothpick
- Blade, large
- Reamer, punch and sewing awl
- Wood saw
- Blade, small
- Tweezers

Choice of 8 Body Colors, 12 text colors. Can be customized with 15 characters per side max. As Shown:

\$60.99 at Victorinox.com



NOAA 5000 Digital Emergency Radio

NOAA Weather Alerts, AM/FM, Short Wave Radio, SOS Alarm, Cellphone USB Charger, Flashlight, Reading Lamp, Utility Strap 5 Way Powered: Solar, Hand Crank, USB rechargeable onboard battery, 3 AAA batteries & 5V USB input. Available in Yellow or Black. **\$35.99 at Amazon.com**



Continued on Page 21



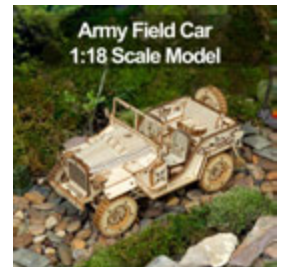
PUZZLES & GAMES



CRAFTHUB Parrot Yin Yang Wooden Jigsaw Puzzle
This stunning 10"x10" puzzle has 134 pieces shaped like various animals! One of many designs. **\$29.90** at [Amazon.com](#)



ROKR 3D Mechanical Wooden Puzzle. Car fully articulates when assembled! Other cars, trains, trucks and puzzles available at various prices. This item: **\$22.99** at [Amazon.com](#)



Juegoal 4-in-1 Wooden Fast Sling Puck Set
This beautiful game case also includes playing pieces and fields on top & bottom for Chess, Checkers and Tic Tac Toe. **\$26.39** at [Amazon.com](#)



Gorgeous Solid Oak Cribbage Board Game from Plusvivo brand. 3 Tracks, 9 Metal Pegs & Storage Areas for 2 standard sizes playing card decks (cards not included). 15.5 X 4.9 X 1.2 **\$25.99** at [Amazon.com](#)



PUZZLES & GAMES



JIGFOXY Wooden Jigsaw Puzzle for Adults
This "Fearless Wolf" puzzle is 16"x11.5" and has 300 pieces individually shaped for an added challenge! Gorgeous wooden gift box included. **\$39.99 at Amazon.com**

YUTIN 6 in 1 STEM Wood Building Kits for Kids ages 8+
Has all parts needed to complete 6 fully articulating vehicles, operated manually or via battery. **\$21.99 at Amazon.com**



Dinosaur Stacking Game from Montessori brand, ages 3-7
2 high-quality sets of wooden dinosaurs and bases to challenge kids' ability to strategize weight & balance. Take turns or see who can stack without topple first! **\$26.99 at Amazon.com**



HOLIDAY GIFT IDEAS & BUYING GUIDE *continued*

PETS



By mrliance

Magic Flying Saucer Ball

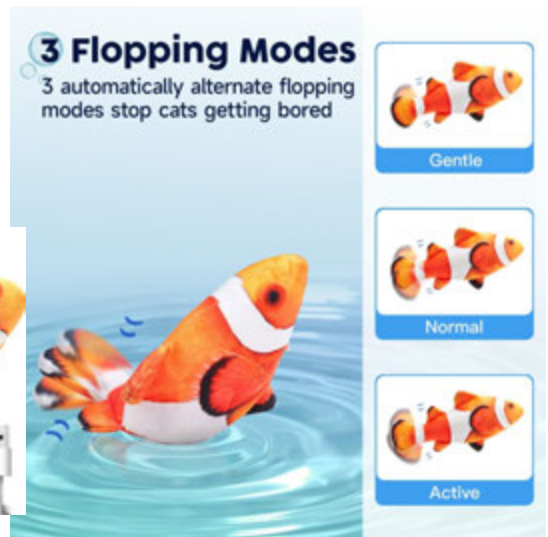
2 Forms Freely Switch,
Soft and Eco-friendly
TPE Material



Flying Saucer Ball Toy
Throw this for your dog as a flying disc or ball. Dogs can learn to press on disc to pop into ball form for play! \$12.99 each or 4 –pack is \$38.99 at [Amazon.com](https://www.amazon.com)



Tempcore 3 Way Collapsible Cat Tunnel with toys
Also great for bunnies & puppies this toy comes in 7 different colors and finishes at \$12.99-\$18.99 each. Easily collapses for stowing & then pops open quickly for play time. Example shown above is called Blue Coin pattern. \$13.99 at [Amazon.com](https://www.amazon.com)



Potaroma 10" Floppy Fish Toys for Cats and Dogs
Very popular for the past few years, this version is upgraded to include a remote control to participate with your pet. Your pet can also still play via the motion activation without you. Available in Grey Carp or Clownfish version for hours of fun. Recharges via included USB cable and has a washable removable cover. \$14.98 at [Amazon.com](https://www.amazon.com)

We hope you've enjoyed this Holiday Gift Ideas & Buying Guide! Have a Merry Christmas & Happy New Year! ★



Contest Calendar - December 2023

<u>+ NCCC FT4 Sprint</u>	0100Z-0130Z, Dec 1
<u>+ NCCC RTTY Sprint</u>	0145Z-0215Z, Dec 1
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 1
<u>+ NCCC Sprint</u>	0230Z-0300Z, Dec 1
<u>+ K1USN Slow Speed Test</u>	2000Z-2100Z, Dec 1
<u>+ SEC QSO Party</u>	2100Z, Dec 1 to 2100Z, Dec 2
<u>+ ARRL 160-Meter Contest</u>	2200Z, Dec 1 to 1600Z, Dec 3
<u>+ Kalbar Contest</u>	0000Z, Dec 2 to 2359Z, Dec 3
<u>+ UFT Meeting</u>	0500Z-0800Z, Dec 2 and 1500Z-1800Z, Dec 2 and 0700Z-1000Z, Dec 3
<u>+ Wake-Up! QRP Sprint</u>	0600Z-0629Z, Dec 2 and 0630Z-0659Z, Dec 2 and 0700Z-0729Z, Dec 2 and 0730Z-0800Z, Dec 2
<u>+ PRO CW Contest</u>	1200Z, Dec 2 to 1159Z, Dec 3
<u>+ INORC Contest</u>	1400Z, Dec 2 to 1359Z, Dec 3
<u>+ FT Roundup</u>	1800Z, Dec 2 to 2359Z, Dec 3
<u>+ K1USN Slow Speed Test</u>	0000Z-0100Z, Dec 4
<u>+ ICWC Medium Speed Test</u>	1300Z-1400Z, Dec 4
<u>+ OK1WC Memorial</u>	1630Z-1729Z, Dec 4
<u>+ ICWC Medium Speed Test</u>	1900Z-2000Z, Dec 4
<u>+ Worldwide Sideband Activity Contest</u>	0100Z-0159Z, Dec 5
<u>+ ARS Spartan Sprint</u>	0200Z-0400Z, Dec 5
<u>+ ICWC Medium Speed Test</u>	0300Z-0400Z, Dec 5

Continued on Page 25



Contest Calendar - December 2023

<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 6
<u>+ Phone Weekly Test</u>	0230Z-0300Z, Dec 6
<u>+ A1Club AWT</u>	1200Z-1300Z, Dec 6
<u>+ CWops Test</u>	1300Z-1400Z, Dec 6
<u>+ VHF-UHF FT8 Activity Contest</u>	1700Z-2100Z, Dec 6
<u>+ Mini-Test 40</u>	1700Z-1759Z, Dec 6
<u>+ Mini-Test 80</u>	1800Z-1859Z, Dec 6
<u>+ CWops Test</u>	1900Z-2000Z, Dec 6
<u>+ QRP ARCI Topband Sprint</u>	0000Z-0300Z, Dec 7
<u>+ Walk for the Bacon QRP Contest</u>	0000Z-0100Z, Dec 7 and 0200Z-0300Z, Dec 8
<u>+ CWops Test</u>	0300Z-0400Z, Dec 7
<u>+ CWops Test</u>	0700Z-0800Z, Dec 7
	1800Z-1900Z, Dec 7 (CW) and 1900Z-2000Z, Dec 7 (SSB) and 2000Z-2100Z, Dec 7 (FM) and 2100Z-2200Z, Dec 7 (Dig)
<u>+ SKCC Sprint Europe</u>	2000Z-2200Z, Dec 7
<u>+ NCCC FT4 Sprint</u>	0100Z-0130Z, Dec 8
<u>+ NCCC RTTY Sprint</u>	0145Z-0215Z, Dec 8
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 8
<u>+ NCCC Sprint</u>	0230Z-0300Z, Dec 8
<u>+ K1USN Slow Speed Test</u>	2000Z-2100Z, Dec 8
<u>+ PODXS 070 Club Triple Play Low Band Sprint</u>	0000Z, Dec 9 to 2359Z, Dec 11

Continued on Page 26



Contest Calendar - December 2023

<u>+ ARRL 10-Meter Contest</u>	0000Z, Dec 9 to 2400Z, Dec 10
<u>+ TRC Digi Contest</u>	0600Z, Dec 9 to 1800Z, Dec 10
<u>+ SKCC Weekend Sprintathon</u>	1200Z, Dec 9 to 2400Z, Dec 10
<u>+ ARI 40/80 Contest</u>	1300Z, Dec 9 to 1300Z, Dec 10
<u>+ International Naval Contest</u>	1600Z, Dec 9 to 1559Z, Dec 10
<u>+ QRP ARCI Holiday Spirits Sprint</u>	2000Z-2300Z, Dec 10
<u>+ K1USN Slow Speed Test</u>	0000Z-0100Z, Dec 11
<u>+ 4 States QRP Group Second Sunday Sprint</u>	0100Z-0300Z, Dec 11
<u>+ ICWC Medium Speed Test</u>	1300Z-1400Z, Dec 11
<u>+ OK1WC Memorial</u>	1630Z-1729Z, Dec 11
<u>+ ICWC Medium Speed Test</u>	1900Z-2000Z, Dec 11
<u>+ Worldwide Sideband Activity Contest</u>	0100Z-0159Z, Dec 12
<u>+ ICWC Medium Speed Test</u>	0300Z-0400Z, Dec 12
<u>+ NAQCC CW Sprint</u>	0130Z-0330Z, Dec 13
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 13
<u>+ Phone Weekly Test</u>	0230Z-0300Z, Dec 13
<u>+ A1Club AWT</u>	1200Z-1300Z, Dec 13
<u>+ CWops Test</u>	1300Z-1400Z, Dec 13
<u>+ Mini-Test 40</u>	1700Z-1759Z, Dec 13
<u>+ VHF-UHF FT8 Activity Contest</u>	1700Z-2100Z, Dec 13
<u>+ Mini-Test 80</u>	1800Z-1859Z, Dec 13
<u>+ CWops Test</u>	1900Z-2000Z, Dec 13
<u>+ CWops Test</u>	0300Z-0400Z, Dec 14
<u>+ CWops Test</u>	0700Z-0800Z, Dec 14
<u>+ EACW Meeting</u>	1900Z-2000Z, Dec 14

Continued on Page 27



Contest Calendar - December 2023

<u>+ NCCC FT4 Sprint</u>	0100Z-0130Z, Dec 15
<u>+ NCCC RTTY Sprint</u>	0145Z-0215Z, Dec 15
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 15
<u>+ NCCC Sprint</u>	0230Z-0300Z, Dec 15
<u>+ AGB-Party Contest</u>	1600Z-1700Z, Dec 15
<u>+ Russian 160-Meter Contest</u>	1800Z-2200Z, Dec 15
<u>+ K1USN Slow Speed Test</u>	2000Z-2100Z, Dec 15
<u>+ OK DX RTTY Contest</u>	0000Z-2400Z, Dec 16
<u>+ Feld Hell Sprint</u>	0000Z-2359Z, Dec 16
<u>+ Croatian DX Contest</u>	1400Z, Dec 16 to 1400Z, Dec 17
<u>+ ARRL Rookie Roundup, CW</u>	1800Z-2359Z, Dec 17
<u>+ Run for the Bacon QRP Contest</u>	2300Z, Dec 17 to 0100Z, Dec 18
<u>+ K1USN Slow Speed Test</u>	0000Z-0100Z, Dec 18
<u>+ ICWC Medium Speed Test</u>	1300Z-1400Z, Dec 18
<u>+ OK1WC Memorial</u>	1630Z-1729Z, Dec 18
<u>+ ICWC Medium Speed Test</u>	1900Z-2000Z, Dec 18
<u>+ Worldwide Sideband Activity Contest</u>	0100Z-0159Z, Dec 19
<u>+ ICWC Medium Speed Test</u>	0300Z-0400Z, Dec 19
<u>+ NAQCC CW Sprint</u>	0130Z-0330Z, Dec 20
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 20
<u>+ Phone Weekly Test</u>	0230Z-0300Z, Dec 20
<u>+ A1Club AWT</u>	1200Z-1300Z, Dec 20
<u>+ CWops Test</u>	1300Z-1400Z, Dec 20
<u>+ Mini-Test 40</u>	1700Z-1759Z, Dec 20
<u>+ VHF-UHF FT8 Activity Contest</u>	1700Z-2100Z, Dec 20

Continued on Page 28



Contest Calendar - December 2023

<u>+ Mini-Test 80</u>	1800Z-1859Z, Dec 20
<u>+ CWops Test</u>	1900Z-2000Z, Dec 20
<u>+ Walk for the Bacon QRP Contest</u>	0000Z-0100Z, Dec 21 and 0200Z-0300Z, Dec 22
<u>+ CWops Test</u>	0300Z-0400Z, Dec 21
<u>+ CWops Test</u>	0700Z-0800Z, Dec 21
<u>+ NTC QSO Party</u>	1900Z-2000Z, Dec 21
<u>+ NCCC FT4 Sprint</u>	0100Z-0130Z, Dec 22
<u>+ NCCC RTTY Sprint</u>	0145Z-0215Z, Dec 22
<u>+ QRP Fox Hunt</u>	0200Z-0330Z, Dec 22
<u>+ NCCC Sprint</u>	0230Z-0300Z, Dec 22
<u>+ K1USN Slow Speed Test</u>	2000Z-2100Z, Dec 22
<u>+ RAEM Contest</u>	0000Z-1159Z, Dec 23
<u>+ CW QRS Xmas Activity</u>	0000Z, Dec 24 to 2359Z, Dec 31
<u>+ K1USN Slow Speed Test</u>	0000Z-0100Z, Dec 25
<u>+ ICWC Medium Speed Test</u>	1300Z-1400Z, Dec 25
<u>+ QCX Challenge</u>	1300Z-1400Z, Dec 25
<u>+ OK1WC Memorial</u>	1630Z-1729Z, Dec 25
<u>+ QCX Challenge</u>	1900Z-2000Z, Dec 25
<u>+ ICWC Medium Speed Test</u>	1900Z-2000Z, Dec 25
<u>+ Worldwide Sideband Activity Contest</u>	0100Z-0159Z, Dec 26
<u>+ ICWC Medium Speed Test</u>	0300Z-0400Z, Dec 26
<u>+ QCX Challenge</u>	0300Z-0400Z, Dec 26
<u>+ DARC Christmas Contest</u>	0830Z-1059Z, Dec 26
<u>+ SKCC Sprint</u>	0000Z-0200Z, Dec 27
<u>+ Phone Weekly Test</u>	0230Z-0300Z, Dec 27

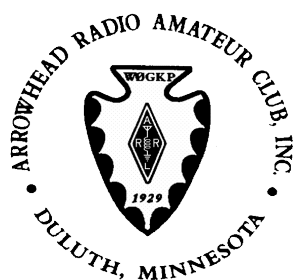
Continued on Page 29



- | | |
|---------------------------------------|--------------------------------|
| <u>+ A1Club AWT</u> | 1200Z-1300Z, Dec 27 |
| <u>+ CWops Test</u> | 1300Z-1400Z, Dec 27 |
| <u>+ Mini-Test 40</u> | 1700Z-1759Z, Dec 27 |
| <u>+ Mini-Test 80</u> | 1800Z-1859Z, Dec 27 |
| <u>+ CWops Test</u> | 1900Z-2000Z, Dec 27 |
| <u>+ CWops Test</u> | 0300Z-0400Z, Dec 28 |
| <u>+ CWops Test</u> | 0700Z-0800Z, Dec 28 |
| <u>+ NCCC FT4 Sprint</u> | 0100Z-0130Z, Dec 29 |
| <u>+ NCCC RTTY Sprint</u> | 0145Z-0215Z, Dec 29 |
| <u>+ NCCC Sprint</u> | 0230Z-0300Z, Dec 29 |
| <u>+ K1USN Slow Speed Test</u> | 2000Z-2100Z, Dec 29 |
| <u>+ RAC Winter Contest</u> | 0000Z-2359Z, Dec 30 |
| <u>+ YOTA Contest</u> | 1200Z-2359Z, Dec 30 |
| <u>+ Original QRP Contest</u> | 1500Z, Dec 30 to 1500Z, Dec 31 |
| <u>+ Stew Perry Topband Challenge</u> | 1500Z, Dec 30 to 1500Z, Dec 31 |
| <u>+ Bogor Old and New Contest</u> | 0900Z-2359Z, Dec 31 |

Our thanks to Bruce Horn, WA7BNM for use of this calendar!
Visit Bruce at www.contestcalendar.com/contestcal.html

The ARAC RELAY



Published monthly and distributed free to members, "The RELAY" is the official publication of the Arrowhead Radio Amateur Club, Inc. Members are encouraged to submit articles, opinions, and classifieds. Your submission will be placed as soon as possible providing it does not conflict with the bylaws of the Arrowhead Radio Amateur Club, Inc. The editors reserve the right to omit any submission that is not a required item. If a submission is questionable, it will be presented to the Board of Directors at the next scheduled board meeting for authorization.

