QSO'er

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September-October

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QSO'er

A publication of the
Fox Cities Amateur Radio Club
P.O. Box 2346
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www.fcarc.club

FCARC Officers

President— Mike Moore (WI9MMM)

Vice-President— Andy Lawton (AJ9L)

Treasurer— Donna Mendyke (KC9THF)

Secretary— Gene Wall (KE8KWF)

Membership Coord— Deenah St Claire (KD9TXA)

Technical Director— Larry Peterson (WA9TT)

Members At Large

Brian Miller (N9BAM)

Rudy Reynebeau (KD9RPW)

Mike Miller (KD9QHQ)

On the cover: Laurel Eihusen (KD9AJT) stands next to three of his homebuilt "cube" antennas. Laurel uses the 2-meter cube (center antenna) each week for the Wednesday Coffee Klatch Net from Chick-Fil-A. His antennas were featured at the October General Membership Meeting. See the meeting minutes for remarks about the presentation.

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Message From the Editor

Preparing For the Winter Ham Radio Season

By Gene Wall (KE8KWF)
FCARC Secretary and QSO'er Editor

The leaves are almost all on the ground with the exception of a few stubborn trees who will hold out until December. When the first few freezing nights hit, they give up and go into a 'self-protect' mode in preparation for the long winter.

Ham radio operators also go through a transformation during the season. It is time to start thinking about what we're going to do over the winter months. The Saturday fox hunts wind down. Maybe we opt to stay home in our warm shack instead of going out to parks. If you are wondering what you can do over the winter, here are a few idea.

- If you have not joined the club on a Social Saturday for breakfast, schedule time on the first Saturday of the month to join your fellow hams and relax in the warmth of Golden Corale.
- The winter months are a perfect time to relax and study for your next license upgrade. Within a few months you can upgrade your license in time to be ready for POTA when the spring season arrives.
- Find a new net to participate in. Besides the nets that FCARC hosts, a simple search on the Internet can produce information about nets hosted by other groups around the area, or the world.
- Build an antenna. This could be your first antenna or your 10th antenna. It doesn't matter since every new antenna is an experiment in the hobby. This edition of QSO'er has some ideas.
- Learn morse code. While it is possible to learn morse code all year round, this, like studying for an upgrade, can be a relaxing way to enjoy the winter months from inside your shack.
- Seek out an Elmer to learn a new skill. Even Elmer's need a plan to conquer the gray winter months and helping another Ham is a rewarding way to share our hobby.
- If you saw something during one of the club meeting demonstrations that interested you, this is a perfect time of year to start explore what you learned. I personally have been struggling with Winlink for a few years. I think this winter would be a great time for me to take what Mike (WI9MMM) showed us a few months ago and try to make it work on my own system one more time.

This is a just a very short list of the endless possibilities. Now that you have read this, think about what your winter goals are going to be and feel free to share them with another ham. Afterall, learning about our hobby is fun, but it is even more fun with a friend.

Enjoy this edition of QSO'er where we have a random selection of topics that might inspire you to create your winter ham radio goals.

73,
Gene

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FCARC 2025 CLUB DUES

It's time to pay your dues. A 1-year membership is only $20. For your membership you receive the following benefits:

- ⇒ Mentorship from Elmer's who keep pace with the advancing technology of the hobby.
- ⇒ Access to resources such as the club radio station
- ⇒ Experience Field Day for the first, or 40th time. Club members will show you the ropes of how to set up and operate in field conditions.
- ⇒ Contesting as a group. This is a great way to break into contesting without the pressure of figuring out how to contest by yourself.
- ⇒ Affiliation with a public service group whose reputation is growing in the Fox Cities.
- ⇒ Monthly general membership meetings that include mini seminars on a variety of topics to expand your knowledge.

Dues can be paid in a variety of ways over the next two months.

- * Cash or check paid at any General Membership meeting
- * Mail a check to the club PO Box (see page 2 of the newsletter)
- * Paypal

Your dues help sustain the clubs local repeater network, update equipment used by the club, and offset member costs for general operations in our community.

If you have questions about your membership, contact Donna (KC9THF). Her information in QRZ is current.

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FCARC Holiday Pot Luck

Monday, December 16, 2024

7:00 pm

Maplewood Middle School

BRING A DISH TO PASS.

We will have a VERY brief general membership meeting before enjoying a meal with our friends.

Member Spotlight

My name is Kelsey Stickney (KD8BLO). I have been a Ham for 19 years, but haven't been particularly active since high school ('05 - '09).

I currently live in Appleton. I am interested in all things electronics - especially vintage electronics. Additionally, I enjoy playing guitar. I am also a movie buff - especially 80s/90s sci-fi and horror.

In the hobby, I am currently interested in HF DXing and QRP operation, APRS, WSTJ-X (various modes), digital hotpots, and SDR technology.

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Hints & Hacks

Share your hints (or hacks) with fellow hams by sending them to ota@arrl.org or *On the Air*, ARRL, 225 Main St., Newington, CT 06111.

HINT

Space Blanket Counterpoise

Hams often must set up and operate in remote areas with limited resources. A practical antenna is a necessity during such operations. A skilled operator can design a vertical antenna for VHF or UHF on the spot, but a counterpoise is needed, and creating one can be a challenge.

This is where the space blanket comes in. A space blanket is composed of a metal surface on a flexible Mylar base. It is easy to fold up and store, and can fit into a shirt pocket or go-bag. It unfolds quickly and can be ready to use as an antenna counterpoise in a couple of minutes. It can be used anywhere a vertical antenna is desired.

Just lay the space blanket on a flat surface such as a table, the ground, or a sidewalk, and it's operational in minutes. You may need to add a support for the antenna, in order for it to stand upright on the blanket.

How well does the space blanket work? Without the space blanket, the small mobile antenna shown in the photo has an SWR above 2.0 to 1. By simply adding the space blanket beneath the antenna, the SWR is reduced to 1.2 to 1, because the space blanket provides the necessary counterpoise for the vertical antenna very effectively.

When the space blanket is laid out on top of a surface, it would be wise to tack it down using thumbtacks or some kind of tape. When I initially tested the space blanket setup, the SWR would vary as the breeze moved the edges of the space blanket. I found that small rocks placed along the edges of the blanket stabilized it, prevented the breeze from moving the edges, and stabilized the SWR.

Vernon Harris, W7GGM

A VHF/UHF vertical antenna can be set up quickly and easily just about anywhere, using an inexpensive space blanket as a counterpoise.

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October FCARC General Membership Minutes

By: Gene Wall, KE9KWF

Per the organization bylaws, a quorum was achieved. There was a quorum with a total number of 44 in attendance. Mike Moore (WI9MMM) called the meeting to order at 7:00 pm. Roll call was taken by all members in attendance.

The minutes of the last meeting were approved as published in the newsletter.

The Elmer of the evening was Gene Wall, KE8KWF.

Committee Reports

Secretary – Gene Wall (KE8KWF) – Gene had nothing significant to report.

Treasurer – Donna Mendyke (KC9THF) – nothing significant to report.

Membership Coordinator – Deenah St Claire (KD9TXA) – 147 on the website roster.

Technical Director – Larry Peterson (WA9TT) – The tech tip for the evening was from Laurel Eihusen (KD9AJT). He spoke on the topic of his home built cube antennas. The cube is a folded loop antenna. He spoke about his experiences with using these antennas, including the challenges with tuning them.

Members at Large – If you have an idea for a program that you can give or would like to see, please speak to Mike (KD9QHQ), Rudy (KD9RPW) or Brian (W9BAM).

Special Committees

Repeater Committee – Andy Lawton (AJ9L) – Andy presented a proposal for the club to vote on the club to purchase a duplexer, antenna, and lightning arrester, for $1,800, to support a 23 cm (1.2 GHz) repeater, currently owned by Eric Verhagen (N9HJ). The motion passed of 26 in favor, and 1 opposed.

Website Committee – Dave Sprangers (ND9DW) – The new website is currently operating.

License testing – Rick Kosiorek (WJ9K) – The next testing will be on November 3, 2024, at the FCARC Hamfest. Additionally, anyone interested in taking an online class for upgrading to General, see the club website for information.

Public Information – Carol Young (W9PIO) – Carol reported that she has been marketing our hamfest to other hamfests around the state.

Special Business

1. **Ham of the Year** – In November 2024 we will start collecting nominations for Ham of the Year.

New Business

None.

Old Business

Hamfest – Tony Mach (AB9IO) – November 3, 2024 – Lucky Dawgz location – Tony gave a brief update on the event. Some tables are still available. You can purchase tables online at the club website. Additionally, Tony gave a run down of the ticket prices and the prizes.

FCARC Potluck, December 16th, Mike Moore, WI9MMM

Winter Field Day, January 25, 2025, Coordinator position open. We will also do license testing at field day. Field day will be held at the school in the Community Room.

EAA – Jon Oldenburg (AB9AH) – EAA went very well this year. He is currently waiting for the next mail pick up to see if there are any requests for QSL cards.

WIPOTA – Larry Peterson (WA9TT) – September 21, 2024. Larry gave a brief overview of the successes from the contest.

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October FCARC General Membership Minutes (continued)

Otto Grunski Runski – Gene Wall (KE8KWF) – September 28, 2024 – Gene thanked everyone who helped out.

St. Joe's 5K & Fun Run – October 5, 2024 – Mike thanked everyone who helped with this event.

Jamboree On the Air (JOTA) – Larry Peterson (WA9TT) – October 19, 2024 – Larry described how scouts will earn their radio merit badge as well as the radio bands that will be operated on. Anyone interested in supporting JOTA can contact Larry.

Recruiting Hamfest Chairman – Mike (WI9MMM) announced that Tony is stepping down as the Hamfest committee chairman. Tony believes that it is time to get some fresh perspective and is happy to help with transition between chairpersons.

Recruiting Field Day Chairman – The club is actively seeing a new chairman for field day.

Technical Questions/Topic – None

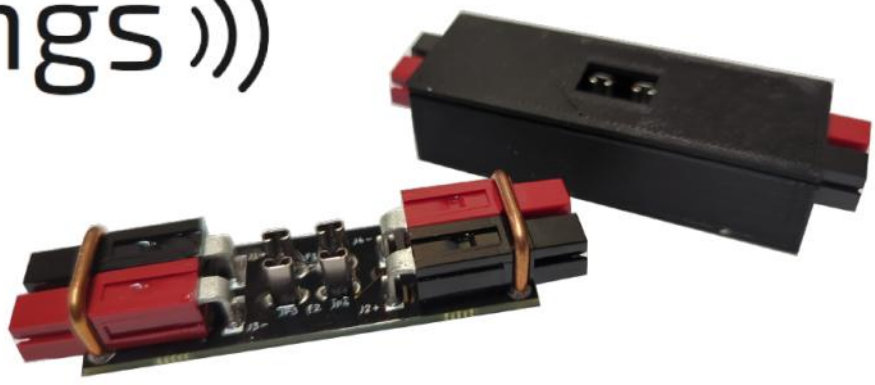
Show and Tell –

a. Carol Young announced that she brought fliers for the band pass filters that she is selling in addition to a Wolf River Coil Odophone that is on on sale.

Program – *How Did You Get Into Ham Radio?* – Members were given the microphone to give a short story about how they got into ham radio.

Adjourn at 8:35 pm

HamThings



Chris N9CVR is selling Powerpole Fuse Blocks. They are designed for mini APM/ATM blade fuses, up to 30 amps. Each Fuse Block weighs only 0.8oz!

Club member pricing: $13 for a kit, $9 for an enclosure; $29 for a complete Fuse Block.
Talk to Chris, good on QRZ, or HamThingsLLC.etsy.com,
Use promo codes W9ZLCLUBPRICE and W9ZLHANDDELIVER

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10 GHz Contest Recap

By: Larry Peterson, WA9TT

ARRL sponsors a 10+ GHz contest each year. It runs the 3rd weekend of August and the 3rd weekend of September. During this time, many hams across the US operate on 10 GHz as rovers or from their home QTH. Some hams also operate on 24 & 47 GHz, or even higher frequencies.

The goal of this contest is to accumulate the longest total distance for all microwave QSOs.

Larry WA9TT traveled to Minnesota to operate with a rover pack on August 17-18.

In order to be successful you need a long, clear path to the horizon. Corn fields don't cut it! Sometimes a rover team needs to drive further when corn instead of soy beans are grown this season.

Gary WB0LJC spent countless hours before the contest coordinating efforts for our rover team, and also for many other hams in the Minnesota area and surrounding states. Gary has been a top participant for many years in this contest.

Rovers must move 16km or 10 miles to activate a new location. The team activated from 19 locations.

There were four operators in the group. Holly K0HAC, Chris N0UK, Larry WA9TT and Gary WB0LJC.

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10 GHz Contest Recap (continued)

Each operator is required to bring and operate their own station. In the case of a married couple like Chris N0UK and Holly K0HAC, ARRL allows them to share their station for QSOs.

The most unusual encounter occurred near the end of the second day when Gary and Larry found a roadside location. At this broad ditch were three headstones.

This child died in his first year of life in 1872. Larry read the inscription to Gary in German, that is, auf Deutsch.

Larry finished this weekend with 100 QSOs for a total distance of 28,279 km. That's an average of 283 km per QSO, or 176 miles

This is accomplished by bouncing the microwave signal in the tropospheric layer some 7-9 miles high.

He worked 16 different stations along the course from south of the Twin Cities down to Albert Lea and into northern Iowa, and the back up via Mankato.

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Rohn Tower For Sale

The exact height is unknown, but based on the photos it is estimated at 20-30 feet. The Yagi on the top is for television. The new owner of the home will not be using the antenna.

The location is Lowell, Wisconsin

Interested parties can contact Holly Cobb at (414) 736-2538 or email at 4uholl@gmail.com to discuss price.

60’ Rohn Tower For Sale

Tower comes with rotor plate and thrust bearing.
Location is in the Appleton, Wisconsin.
Asking $900

Contact Rick Kosiorek, WJ9K, for more information.

Not familiar with a Rohn tower? Here are some facts.

The ROHN 45G is a true multi-use structure that provides excellent strength for applications up to 300'. It is offered with heavy steel round legs to satisfy a variety of needs under varied conditions

*Completely hot-dipped galvanized after fabrication.
*Built on a 16-3/4" equilateral triangle design
*High strength tubular legs joined by Zig-Zag® cross members
*Continuous solid round steel bracing

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Reprinted from *QST* Magazine

Isle Royale National Park: A POTA Mini-DXpedition

Three hams crossed Lake Superior by seaplane to activate this isolated island.

Jon Oldenburg, AB9AH

In February 2023, Wolf River Coils co-owner Gary Hoehne, KB9AIT, brought up the idea of going on a mini-DXpedition to activate Isle Royale National Park in Lake Superior for Parks on the Air® (POTA) with his co-owner Terry Schilling, N9AOT, and me. We quickly agreed that this sounded like a fun adventure.

Founded in 1931, Isle Royale National Park is accessible only by boat or seaplane. It's the least visited US national park, with the highest yearly attendance recorded in 2019 — 18,977 visitors. The island is 45 miles long and 9 miles wide, making it the fourth largest lake island in the world. Due to severe winter conditions, it's open only from April through October.

Gary Hoehne, KB9AIT; Larry Peterson, WA9TT, and Jon Oldenburg, AB9AH, boarded a seaplane to Isle Royale from a dock in Houghton, Michigan. [Jon Oldenburg, AB9AH, photo]

The POTA movement began in 2016, following ARRL's year-long National Parks on the Air (NPOTA) event, which was created to celebrate the 100th anniversary of the National Park System and designed to encourage amateur radio operators to transmit from within national parks. This event inspired the creation of POTA in 2017, which encourages amateur radio operators to operate portable in a variety of parks and public lands (as *activators*) so that *hunters* (operators not in a park) can contact them.

In Gary's research of Isle Royale, he found that it had been activated for POTA on only two occasions, both of which were by the same operator.

Planning for the Trip

After the three of us agreed to take a mini-DXpedition to Isle Royale National Park, Gary contacted the park superintendent and reviewed our plans with them. They approved our plans and sent forms for each of us to complete. After subsequent reviews of what our equipment would consist of and what our space needs would be, the park approved our permit, and the trip was a go!

We would be traveling from Wisconsin to our departure point in Michigan, where our transit options were the ferry (with a travel time of 6 hours) or a seaplane (with a travel time of 1 hour). Gary booked the seaplane for July 13, and the park superintendent was advised of

Jon Oldenburg, AB9AH, operated on the 20-meter band using a Xiegu G90 QRP station. [Gary Hoehne, KB9AIT, photo]

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Gary Hoehne, KB9AIT, enjoyed operating while fellow Isle Royale National Park visitors looked on. [Larry Peterson, WA9TT, photo]

our date for the activation. Terry had a conflict on that date and was unable to come along. We needed to find another operator, as Terry had been tasked with driving the Wolf River Coils motor home. After making a few phone calls, we added Larry Peterson, WA9TT, our club's POTA guru, to the trip.

Activating Isle Royale

The first leg of our trip began with a 4 ½-hour (238-mile) drive from Appleton, Wisconsin, to Houghton, Michigan, where we were met with a thriving riverfront downtown area. We explored the city for a little bit before finding our hotel. We then proceeded farther north to the tip of the Keweenaw Peninsula, where we tested our go-kit setups and activated a few POTA parks before returning to our hotel for the night.

We awoke the next morning to beautiful weather for the second leg of our trip. We checked in at the seaplane at 7:00 AM and enjoyed the 1-hour flight through cloudless skies over a calm Lake Superior, eventually landing at Tobin Harbor of Isle Royale. The seaplane dock is located opposite the isthmus that forms Rock Harbor (where we were planning to operate), so we had to hike ¾ of a mile using forest trails of about a 15 percent grade — a 22-pound go-kit never felt so heavy!

After checking in at the visitor center, we quickly set up our go-kits and Wolf River Coils antennas at some picnic tables on the shore of Rock Harbor and activated Isle Royale (POTA, US-0039). Gary started operating on 20-meter SSB, and once we were spotted, the action on the air was nearly a continuous pileup. Larry set up a few yards away, where he operated 15-meter FT8. Gary and I took turns operating on the 20-meter band using a Xiegu G90 QRP station and were very successful. We operated from 9:30 AM

A Wolf River Coils Take It Along (TIA) antenna was used for operating. [Jon Oldenburg, AB9AH, photo]

to 3:30 PM EST, which was when we had to tear down our stations and make the hike back to the seaplane dock for our flight out.

Results

All in all, it was a successful and enjoyable trip. We activated Isle Royale making 431 contacts. Larry planned a different route home to Appleton, which enabled us to activate seven additional parks. In total, we activated 14 parks on a 3-day road trip!

Jon Oldenburg, AB9AH, is the retired President of North East WI Inspection Services LLC, which provides commercial and residential building inspection services to governmental agencies. He has held an amateur radio license since 1999, and enjoys POTA, ragchew nets, and restoring and operating Kenwood hybrid transceivers. Jon can be reached at **ab9ah@arrl.net**.

For updates to this article, see the *QST* Feedback page at www.arrl.org/feedback.

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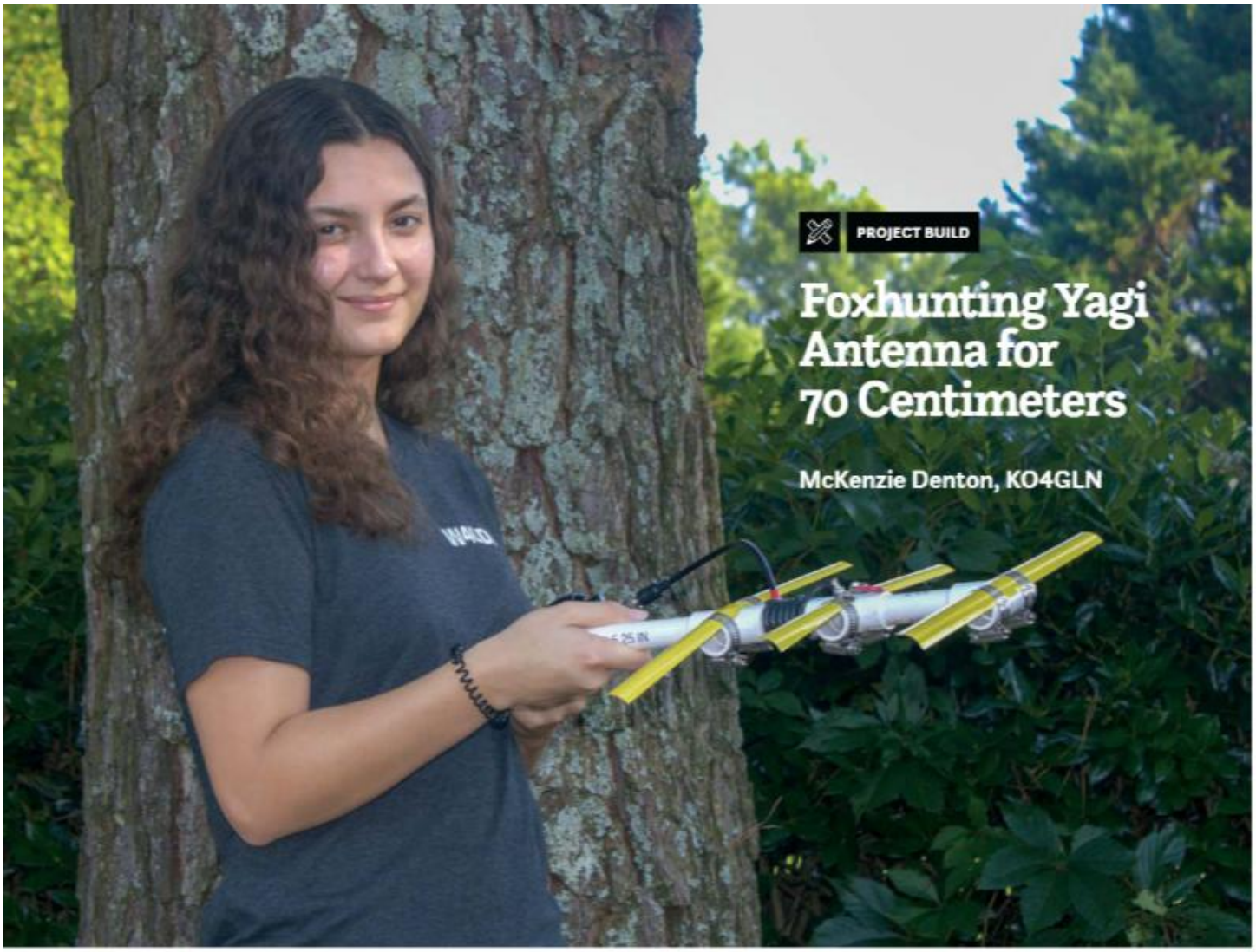
Reprinted from *On the Air* Magazine



PROJECT BUILD

Foxhunting Yagi Antenna for 70 Centimeters

McKenzie Denton, KO4GLN

In an effort to create an engaging and budget-friendly activity at my university's amateur radio club, we set out to build a sleek, affordable Yagi antenna for 70 centimeters that fits comfortably in a backpack, making it perfect for impromptu adventures in radio direction finding.

We offered a foxhunt event that required no prior license or extensive training, making it an ideal introduction to the thrilling world of amateur radio. By focusing on a simple, cost-effective, and compact design, we ensured that the antenna was portable enough for participants to be adventure-ready at a moment's notice, with the ultimate goal of sparking interest in the hobby among beginners

This basic Yagi antenna is made from tape measures, and is based on a design by the Hurst Amateur Radio Club (w5hrc.org/media/2020/11/Tape-Measure-Yagi-440.pdf), which we modified slightly. This project is being presented with their permission.

Tools and Materials

- Soldering iron or crimper
- Tin snips
- Wire cutter
- Flat blade screwdriver or ¼-inch nut driver
- Hacksaw, PVC cutter, or fine-tooth saw
- Sandpaper
- Ruler or tape measure
- Drill and bits (7⁄64 and ¼ inches)
- (1) 13-inch piece of ½-inch Schedule 40 PVC Tube
- (1) 25-foot 1-inch-wide steel tape measure
- (2) ½-inch PVC cross connectors
- (1) ½-inch PVC T connector
- (6) ½-inch to 1¼-inch stainless hose clamps
- (1) 1½-inch piece of 14-gauge wire
- (2) #8 washers
- (2) #8 1¼-inch hex head slotted sheet metal crew
- (2) 4-inch zip ties
- (4) #8 crimp-on ring terminals
- (1) pre-made 36-inch length RG-58 coaxial cable with a BNC male connector on one end

Note: The pre-made 36-inch RG-58 coaxial cable is an easy option for a new builder. You can buy them with a BNC male connector attached to both ends. For this project, use wire cutters to cut the connector off one end.

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Construction

Step One

Cut the PVC tubing into three pieces, at the following specified lengths, to make the support boom for the antenna: Piece 1: 6 inches, Piece 2: 3 inches, and Piece 3: 3½ inches (see ①). Fit these lengths together using the PVC cross connectors, and place the PVC T connector at the far end of Piece 3 (see ②). The distance between the first cross and the middle cross is 1½ inches, and the distance between the middle cross and the T connector is 2 inches. This precise alignment is critical for ensuring your antenna functions optimally. Double-check each measurement as you assemble the pieces to guarantee the best performance.

Step Two

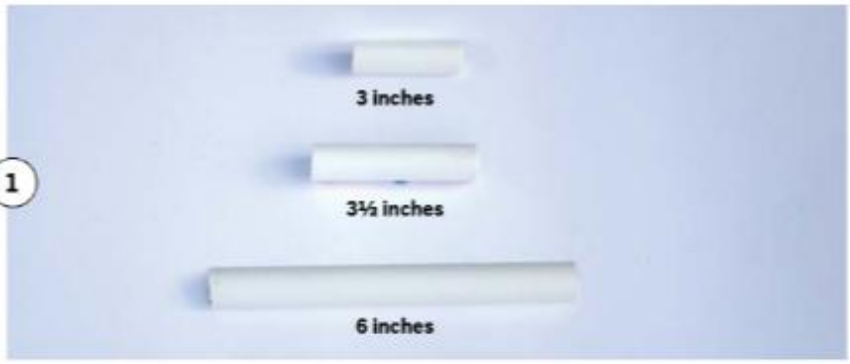
Cut the tape measure into four pieces, at the following specified lengths: The antenna's reflector element will be 13 19/32 inches, and the director element will be 11 1/16 inches. The antenna's driven element, where the feed line will be connected, comprises two pieces, each 5⅜ inches long (see ③).

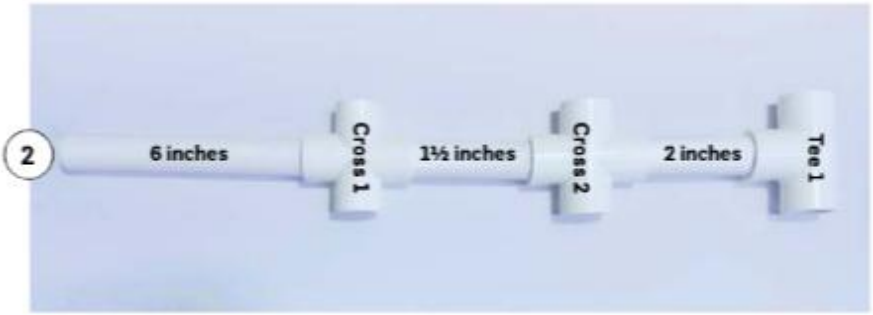
Step Three

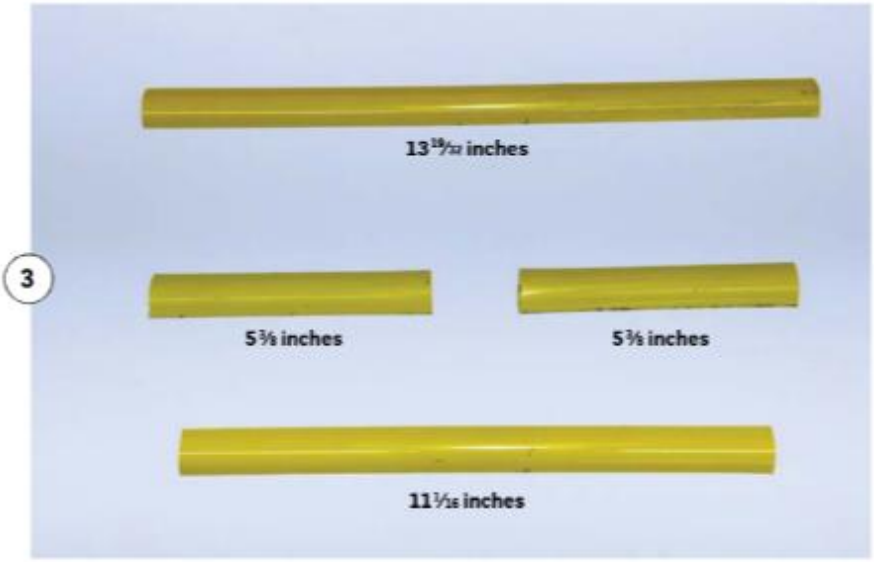
On the two driven element pieces, sand off the paint from one end to create a clean, conductive surface. This is essential for good electrical contact. Wipe away any remaining paint particles with a rag dampened with 70% isopropyl rubbing alcohol to ensure the surface is thoroughly clean.

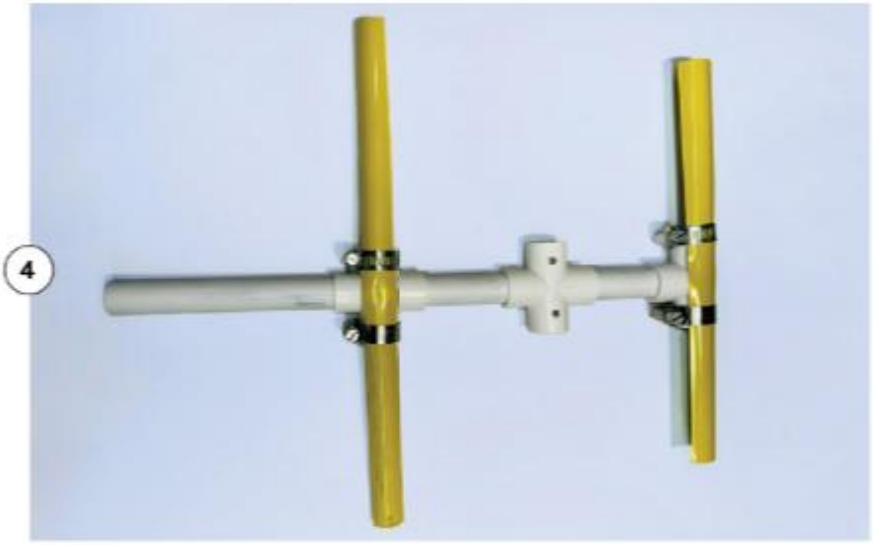
Step Four

Carefully center the director element on the PVC T connector, and secure it using two stainless hose clamps, tightened to a firm hold. Repeat the process to attach the reflector element to the cross connector at the other end of the antenna. On the remaining cross connector, mark an 11/16-inch gap at the center of the cross. Once marked, position it centrally, then use the 7/64-inch drill bit to drill pilot holes on the outer edges of the 11/16-inch marking, one on each side (see ④).









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PROJECT BUILD

Step Five

Next, you'll prepare the driven elements for attachment. On the end of each element where the metal is bare, use a 7⁄64-inch drill bit to drill a hole about ¼ inch away from the end (see ⑤). The positioning of these holes is crucial for the subsequent attachment process, ensuring the elements are securely fixed and aligned properly on your antenna.

Step Six

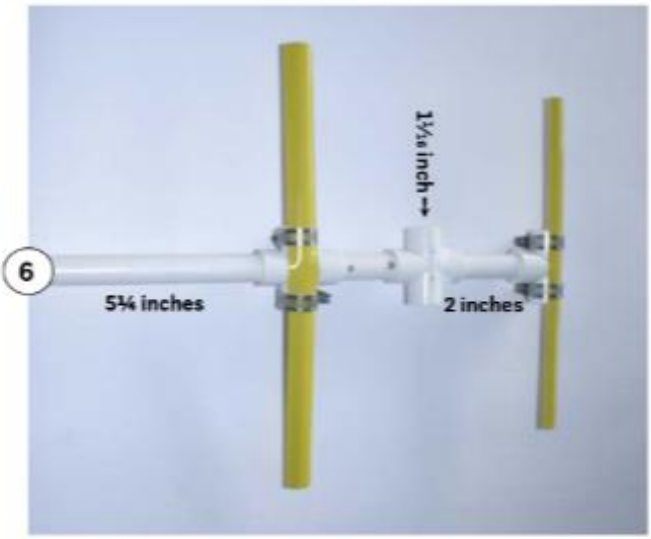
This antenna uses a choke balun to enhance the antenna's performance by minimizing RF interference. To get the boom set up for the balun, use a ¼-inch drill bit to drill a hole directly below the center of the PVC cross that is between the installed elements. Drill the hole vertically through the ½-inch PVC pipe, all the way through. Next, measure ½ inch from the top center of the PVC cross that the reflector element is attached to. Mark this location clearly, then drill vertically, all the way through the ½-inch PVC pipe (see ⑥).

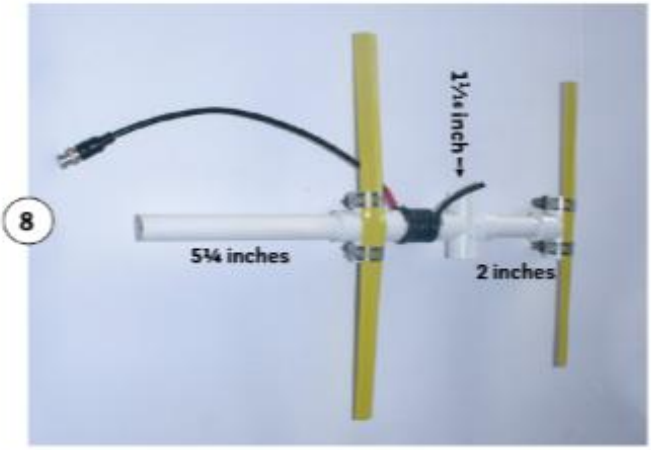
Step Seven

Carefully measure 12 inches from the end of your RG-58 coax cable that has the male BNC connector attached, and mark that point with a piece of tape (see ⑦). This marking is crucial to ensure that you have adequate coax available for the choke balun.

Step Eight

Thread a zip tie from the top of the antenna down through the ¼-inch hole you drilled above the reflector element's PVC cross. Thread the RG-58 coax cable into the hole, and use the zip tie to securely anchor it at the location of the 12-inch marker. From this anchoring point, wrap the rest of the coaxial cable clockwise around the PVC boom five times, directing it toward the central cross where you will eventually attach the driven element. Once you reach the ¼-inch hole below that cross, ensure that there is at least 1½-inch of RG-58 cable extending from the hole, then thread another zip tie through the hole and anchor the cable securely (see ⑧).





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Step Nine

Carefully strip 1 inch of the outer jacket from the section of coax that extends from the hole, and separate the braided wire from the conductor. Attach a #8 ring terminal to each of the exposed ends of the cable: one to the conductor and one to the braided wire (see ⑨). Depending on your preference and the tools available, you can do this either by crimping or by soldering.

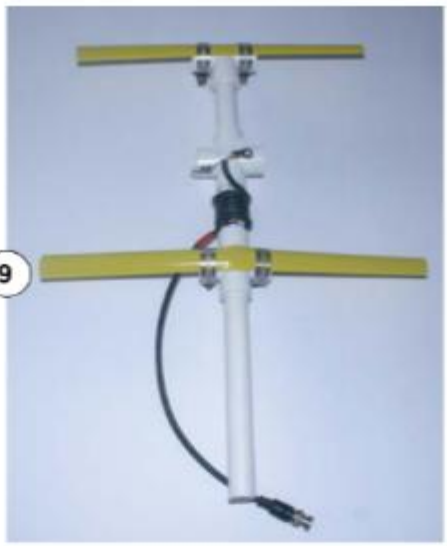
Step 10

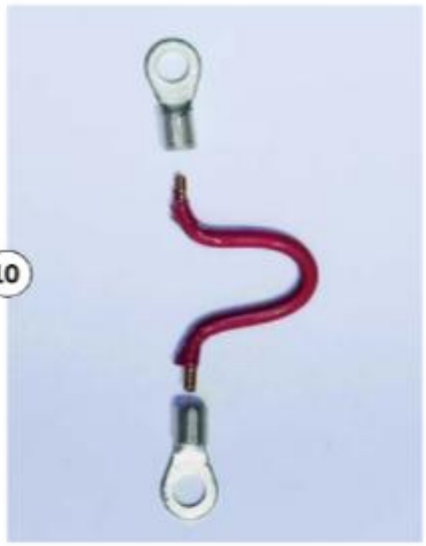
This antenna uses a *hairpin match* to ensure an impedance match. Begin by taking a 1¼-inch piece of 12 or 14 AWG solid copper wire and strip ⅛ inch of insulation off each end. Next, carefully bend the wire into a U shape, ensuring there is a ½-inch gap between the ends. Crimp a #8 ring terminal to each end of the hairpin match (see ⑩).

Step 11

First, position the pieces of the driven element so that their holes align with the pilot holes on the PVC cross. Secure each piece in place with a hose clamp. Next, place the ring terminals of the coax balun on each side of the driven element, right over pilot holes. Place a washer over each ring terminal and stack the ring terminals of the hairpin match on top of the washers. Add another washer on top of each hairpin match ring terminal. Insert a #8 1¼-inch hex head slotted sheet metal screw through the center of each of these stacks. Tighten each screw with a flat blade screwdriver or a ¼-inch nut driver, ensuring that everything is snug and secure.

Note: An adapter will be required to connect the antenna to a handheld radio. The necessary adapter is typically a SMA male to BNC female or and SMA female to BNC female.





Tuning the Antenna

The easiest way to tune this antenna is with an antenna analyzer. Connect the analyzer to the antenna's feed line and sweep across the UHF band until you find the SWR dip. Then, adjust the gap of the hairpin incrementally until you achieve your desired frequency. Each time you make an adjustment, use the antenna analyzer to find the new frequency where the SWR dips. Repeat this process until you reach the desired frequency. My antenna resonates at about 433.900 MHz

Using This Antenna for Foxhunting

Ensure that the antenna is properly connected to your receiving device. Power on the receiver and tune it to the designated frequency within the 70-centimeter band, typically around 430-440 MHz. To locate the hidden transmitter, sweep the antenna in a horizontal arc to identify the strongest signal, pointing you toward the transmitter.

For more precise direction finding, use the *body fading* technique: hold the antenna steady and slowly rotate your body 360 degrees, noting where the signal weakens the most. This point is generally directly opposite the transmitter's location.

As you get closer to the transmitter and the signal strengthens, consider using an attenuator, or reduce the receiver's gain to avoid signal overload, which can skew directional readings. Also, try the *null technique* by aiming the antenna 90 degrees away from the suspected direction of the signal. The point of weakest signal reception will confirm the transmitter's actual direction.

It's advisable to practice these techniques in the 70-centimeter band before an actual event. This will help you become more familiar with the antenna's operation. Be aware that signal reflections off buildings or other structures might affect accuracy. With careful handling and application of these techniques, you'll be well prepared to locate the hidden transmitter during your foxhunt.

McKenzie Denton, KO4GLN, a fervent science enthusiast and pre-med student at Old Dominion University, leads as the President of the Amateur Radio Club. First licensed in 2020, she is an Amateur Extra and Volunteer Examiner; her profound passion for science has steered her to be a key member of the HamSCI team. Active in the amateur radio community, she's involved with the Williamsburg Area Amateur Radio Club (WAARC) and the Potomac Valley Radio Club (PVRC) and currently serves as the ARRL Virginia Section Youth Coordinator, dedicating her efforts to inspiring young enthusiasts.

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2025 ARRL Foundation Scholarship Program Accepting Applications through Jan 6, 2025

The 2025 ARRL Foundation Scholarship Program will begin accepting applications on October 30, 2024. Applications will be accepted through January 6, 2025.

More than 100 scholarships ranging from $500 to $25,000 will be awarded. All applicants must be active, FCC-licensed amateur radio operators.

The ARRL Foundation Scholarship Committee will review all applicants for eligibility and award decisions. All applicants must be an active, FCC-licensed amateur radio operators. All applicants must submit a completed online application. Transcripts and any additional required documents must be submitted **WITH** the application and not emailed separately. A number of scholarships require additional documents, such as a letter of recommendation from a sitting Officer of an ARRL-affiliated club. Applications without accompanying transcripts and additional required documents (if applicable) will not be considered. Scholarship recipients will be notified by early June 2025. Awards are mailed directly to recipients' schools and will be awarded in July 2025.

Information, along with the link to the online application, can be found on ARRL's website: https://www.arrl.org/scholarship-program.

The 2025 scholarship cycle opens at 9:00 am (Eastern Standard Time) on October 30, 2024 and will close at 12:00 pm (Eastern Standard Time) on January 6, 2025.

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Social Saturday
November 9, 2024
9:00 am

What has 16 legs and 8 antennas?
8 Hams enjoying breakfast together.

Our next Social Saturday is only a few weeks away. Enjoy some great conversation, mentorship, and live ragchew, with great food as a bonus.

Golden Corral
1169 North Westhill Blvd.
Appleton, WI 54914

FCARC Club Gear

On sale now at http://www.jse-repair.com

Contact Jeff on his website for information on items that you don't see, but would like. He stocks and makes a wide variety of POTA clothing and flags, hats, club shirts, as well as radio covers.

Optional Name and Callsign Shown

Optional Back of Jacket Embroidery

JSE Est 2009 Custom Embroidery & DTG Printing Hats - Jackets - Shirts

FCARC welcomes your donations in support of our mission to serve amateur radio. As a 501(c)(3) organization, your donations are tax-deductible. You can go to the FCARC website and click on the "Donate" button.

Donate

VISA BANK

GOT QUESTIONS? CALL our Google Voice Information Phone Number
920-358-0118

If you have an item, rig, QSL card, or anything related to Amateur Radio and want to share it with club members, bring it to the club meeting for **SHOW AND TELL**.

A 2-3 minute section put into the agenda for fellow hams to share items they find useful or promotes Amateur Radio.

Meeting Information

Maplewood Middle School
1600 Midway Road
Menasha, WI

Community Room
Enter thru Door 17
Meetings start at 7:00 PM

Meetings are held on the third Monday of each month. Check the FCARC calendar for details.

The FCARC Board of Directors meets on the *second Monday* of each month at Maplewood Middle School. Club members are welcome to attend.

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The next FCARC General Membership meeting will be on Monday, November 18, 2024.

The meeting starts at 7:00 pm at Maplewood Middle School.

WOLF RIVER COILS LLC

Silver Bullet Antenna

From the guys who brought you misfit coils, Wolf River Coils LLC now has misfit collapsible whips.

102 inch collapsible SS whips $15.00 or 3 for $40

213 inch collapsible SS whips $25.00

Now that Wolf River Coils LLC has incorporated a CNC Milling machine for coil production their supply of misfit coils is dwindling as we no longer create a misfit. So if you ever wanted to purchase a misfit SB1000 or SB Mini now is the time because when they're gone, they're gone.

SB1000 sells for $20.00 and the SB Mini sells for $15.00.

Next FCARC Ham Exam

January 25, 2025

Registration starts at 8 am and ends at 9 am. Preregistration is encouraged. A government issued picture ID is required along with proof of your current license. Please see the ARRL.org website for license information and other forms of acceptable ID. The application requires a **Federal Registration Number** and a valid **email address**. FRN's can be obtained free of charge on the FCC.gov website in the ULS section.

Details on each testing date will be posted on the FCARC website.

Cell phones must be silenced and put away during exams. Non cell phone calculators are permitted. Programmable calculator memories must be cleared and are subject to examination by a VE. Cost of the exams are set by our VEC, the ARRL, at $15.

If you fail an exam you may take a different version, time permitting, but you will be charged another $15. If you are successful you may take the next element during that session with no charge.

If you have any questions concerning FCARC Exams or to preregister contact Rick Kosiorek at (920) 809-1010 or WJ9K.mail@gmail.com

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Wisconsin Hamfest Schedule

03/16/2025 - Tri-County WI HamFest 2025
Location: Fort Atkinson, WI
Sponsor: Tri-County Amateur Radio Club
Website: https://www.W9MQB.org

ARRL Student Membership

ARRL Student Membership was established to increase youth participation and long-term involvement in amateur radio. Student members can access ARRL membership benefits including the digital versions of ARRL magazines, and the extensive courses and training materials available through the ARRL Learning Center.

Please note: ARRL requires age verification for all student members. Parental/Guardian consent is required for applicants under 18 years of age. Student memberships are not eligible for add-on printed membership magazine subscriptions. Student membership benefits are subject to other restrictions and exclusions.

Student Membership options:

Option 1: **Full Student Membership.** Dues rate $30 per year. This low-cost membership option is available to US Amateur Radio licensees under the age of 26 years. Applicant must be a resident of the US, its possessions, or Puerto Rico. A full member may vote in ARRL elections for Division Director, Vice Director, and Section Manager. Other restrictions and exclusions may apply.

Option 2: **Free Student Membership.** This no-cost, Associate membership option is available to full-time students aged 21 years or younger. Applicant must be a resident of the US, its possessions, or Puerto Rico. Free Student Membership
excludes access to the ARRL E-mail Forwarding Service, and Associate members may not vote in ARRL elections. Other restrictions and exclusions may apply.

Join Now

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The Ozaukee Radio Club presents its 45th Annual Spring Indoor

Amateur Radio, Electronics & Computer

SWAPFEST

featuring TOWER ELECTRONICS!

Saturday, April 26, 2025

8 AM to 12 PM

Ascension Columbia St. Mary's Center (Milwaukee Curling Club)
W67N890 Washington Ave., Cedarburg, WI 53012

Talk-in: 146.97 MHz – PL 127.3 Hz
Door Prizes! Free WIFI

Food sold by Cub Scout Pack 516

Admission: $7.00 at the gate
Children 12 and under FREE, with a paid adult admission
6 ft. Tables: $12.00 in advance, $15.00 at the door, if available

Use the Order Form below, email, or call Tom Trethewey, KC9ONY at 262-421-6351
Email: swapfest@ozaukeeradioclub.org
More information: http://www.ozaukeeradioclub.org/ or http://www.facebook.com/orcwi

Save the date for **2026**: April 25, 2026 !!

For Advance Tickets and Tables, send check with a **SASE** (Business-Size #10 envelope) to:
Tom Trethewey, KC9ONY- W69N905 Evergreen Ct N, #202, Cedarburg, WI 53012-1170

Name: _____ **Call sign:** _____

Address: _____

Phone number: _____ **Email:** _____

No. of Tickets: _____X $7 = _____ **(Advance tickets are double stub)**

No. of Tables: _____X $12 = _____ **Electricity:** Yes (Add $5) _____No _____

Total Amount: _____ **(Please make checks payable to ORC)**

Tickets and flyers printed by Mequon Copy Master https://mequoncopymaster.com/

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FCARC Lending Library

Chris Reitz, N9CVR
Head Librarian

The FCARC lending library is a repository of references, equipment, and supplies that club members are willing to loan out to other club members. If you would like to borrow an item from the lending library contact the owner and arrange to borrow the item. If you have something you would like to list in the lending library, contact Chris Reitz (N9CVR) to have your item listed.

Library Catalog

Current As Of 11/3/24

Item	Make	Model	Owner	Notes
Coax / Powerpole crimper			N9CVR	contains all required tools for crimping coax and power-pole ends, except wire stripper for powerpoles
Power Meter	Diamond	SX-200	KD9UHZ	
RF Preamp	Ameco	PT-3	KD9UHZ	
Manual Antenna Tuner	MFJ	MFJ-945E	KD9UHZ	
TDR pulse generator	-	-	N9CVR	For Time Domain Reflectometry
TDR potentiometer	-	-	N9CVR	For finding characteristic impedance of TX line. Broken as of 2023.01.29, working on fixing.
75m/40m NVIS dipole	-	-	N9CVR	Requires a tree or pole and some open space to deploy
2m/70cm tape measure			N9CVR	Portable, directional antenna. SO-239 connection. Good
offset attenuator	KC9ON		N9CVR	for fox hunting
20ft fishing pole			N9CVR	Good for portable installations where trees don't exist
misfit 213in whip	Wolf River Coil		N9CVR	Misfit whip - skinniest section doesn't go up (~6in). 3/8"-24 threaded base
Microbit v2 (x2)	BBC	Microbit	N9CVR	USB/Bluetooth Microcontroller with 2.4GHz radio capability and access to library of programs for it
Antenna Analyzer	MFJ	208	WI9MMM	2m Only Antenna Analyzer
2m mobile radio	Yaesu	FT-1500M	N9CVR	2m / Analog FM / 50W + WX.
Code Practice Oscillator	Pacific Antenna	CPO	N9CVR	From club build day. There are 3 in my household, so feel free to borrow one!
2m wattmeter/SWR meter	Shurecom	SW33	KD9TXA	SMA connectors
2m J-pole antenna	-	-	KD9TXA	SO239 connector
Cable tester			KD9TXA	For RJ45 and RJ-11 modular cables
Modular connector crimper			KD9TXA	For RJ45 and RJ-11 modular cables
Coax crimper			KD9TXA	For RG6 (75 ohm cable company coax)
Tripod stand for J-pole			KD9TXA	Ideal for field day. About 6ft height
800W generator			KD9TXA	Gasoline powered

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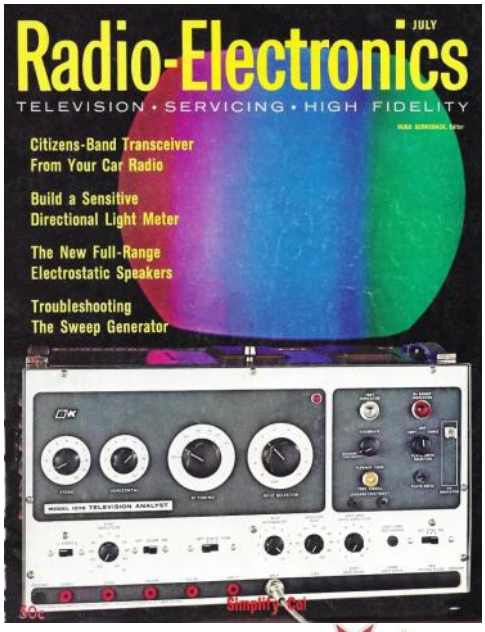
"Testing! Testing...4, 3, 2, 1!"

The comic to the left was taken from the July 1961 edition of "Radio Electronics"



HAM Radio Trivia

Try your luck at answering these HAM trivia questions. The answers are at the bottom.

Of the awards listed here, which award was never given to Guglielmo Marconi?

A) The Nobel Prize B) The IEEE Medal of Honor C) The Order of Merit of the Italian Republic D) The Franklin Medal

2. In what year was Samuel Morse granted a patent for his invention of the Telegraph?

A) 1830 B) 1844 C) 1840 D) 1845

3. The Hallicrafters S-38 was a 5 tube superhet receiver in a wooden cabinet.

A) True B) False

4. Minnesota borders which Canadian prefixes?

A) VY1 B) VO2
C) VE3 & VE4 D)VE5 & VE6

5. What was legendary country music guitar player Chet Atkins' vanity call sign that he recieved in 1998?

A) WA4PIC B) W4CGP C) WA4CGP D) K4HOT

1. C) The Order of Merit of the Italian Republic | 2. C) 1840 | 3. B) False | 4. C) VE3 & VE4 | 5. B) W4CGP

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Elmer's Contact List

This is a listing of HAMS who are willing to help other HAMS out in special areas. Feel free to contact these fellow HAMS with any questions.

Call / Name	Specialty Area	Phone
N9LVS - Dan	FCC Personal Da-	205-4899
WA9TT- Larry	SSTV (analog)	915-4499
N9AOT -Terry	Wires X / Digital	572-2937
KB9AIT - Gary	Wires X	
KC9YL- Anne	CW	682-7978
W1GCS - Greg	Net Control Oper-	740-9408
WJ9K - Rick	Getting on the Air	809-1010
KG9JP - KC	Contesting	602-999-7341

If you are interested in helping other hams and being an Elmer please contact a board member.

Logging Software For Your Shack

N3FJP
http://www.n3fjp.com/

N1MM Logger
https://n1mmwp.hamdocs.com/

WriteLog
https://writelog.com/

TR Log
http://www.trlog.com

WinTest
http://www.win-test.com/

SI by EI5DI
http://www.ei5di.com/

DX Keeper
http://www.dxlabsuite.com/dxkeeper/

FCARC Repeaters

Frequency	Offset	Tone	Remarks
145.330	- 0.600 MHz	100.0	System Fusion
146.760	-.600 MHz	100.0	
146.760	-.600 MHz	107.2	This is a receiver station at Oneida Heights.
443.650	+5.000 MHz	100.0	

FCARC Member Repeaters

Frequency	Offset	Tone	Remarks
224.500	-1.6 MHz	100.0	

FCARC Nets

Net Name	Frequency	Schedule and Extra Information
2-Meter	146.760	Wednesdays at 8:00 pm. Contact John (KC9TFM) if you can be a net control operator.
2-Meter Digital	145.330	First Tuesday of the month at 8:00 pm. You can also use the FCARC's Fusion Room 40216, the W9ZL room. Contact Terry (N9AOT) if you can be a net control operator.
2-Meter SSTV	146.760	Second Sunday of the month at 6:00 pm. Contact Larry (WA9TT) if you can be a net control operator.
222	224.500	2nd Tuesday of the month. Contact Dave (KB9RPH) if you can be a net control operator.
6-Meter	52.550	Third Tuesday of the month. Contact Larry (WA9TT) if you can help be a net control operator.
Morning Coffee Klatch	146.760	Monday, Wednesday, Friday at 9:30 am.

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FCARC Club Calendar

November 2024
2 - Social Saturday
3 - Hamfest
3 - Amateur Radio License Exam
5 - 2 meter digital net (WA9TT) 8 pm
6 - 2 meter net (KC9TFM) 8 pm
10 - 2 meter SSTV net (KB9YUC) 6 pm
11 - Board of Directors meeting 7 pm
12 - 220 Mhz Monthly Net 8 pm
13 - 2 meter net (WA9TT) 8 pm
18 - General Membership Meeting 7 pm
19 - 6 meter net (WI4WD) 8 pm
20 - 2 meter net (WI9MMM) 8 pm
21 - Thanksgiving
27 - 2 meter net (KC9THF) 8 pm

December 2024
3 - 2 meter digital net (KB9AIT) 8 pm
4 - 2 meter net (W9SJO) 8 pm
7 - Social Saturday & Fox Hunt
8 - 2 meter SSTV net (WI9MMM) 6 pm
9 - Board of Directors meeting 7 pm
10 - 220 Mhz Monthly Net 8 pm
11 - 2 meter net (KE8KWF) 8 pm
16 - General Membership Meeting 7 pm
17 - 6 meter net (KB9AIT) 8 pm
18 - 2 meter net (WI4WD) 8 pm
25 - Christmas
31 - New Year's Eve

January 2025
1 - New Year's Day
1 - 2 meter net 8 pm
4 - Social Saturday & Fox Hunt
7 - 2 meter digital net 8 pm
8 - 2 meter net 8 pm
7 - Social Saturday & Fox Hunt
12 - 2 meter SSTV net 6 pm
13 - Board of Directors meeting 7 pm
14 - 220 Mhz Monthly Net 8 pm
15 - 2 meter net 8 pm
20 - General Membership Meeting 7 pm
21 - 6 meter net 8 pm
22 - 2 meter net 8 pm
29 - 2 meter net 8 pm

February 2025
1 - Social Saturday & Fox Hunt
4 - 2 meter digital net (TBD) 8 pm
5 - 2 meter net (TBD) 8 pm
7-9 - Hamcation
9 - 2 meter SSTV net (TBD) 6 pm
10 - Board of Directors meeting 7 pm
11 - 220 Mhz Monthly Net 8 pm
12 - 2 meter net (TBD) 8 pm
18 - 6 meter net (TBD) 8 pm
19 - 2 meter net (TBD) 8 pm
22 - FCARC Annual Banquet
26 - 2 meter net (KC9THF) 8 pm

March 2025
1 - Social Saturday & Fox Hunt
4 - 2 meter digital net (TBD) 8 pm
5 - 2 meter net (TBD) 8 pm
7 - Social Saturday & Fox Hunt
9 - Wisconsin QSO Party
9 - 2 meter SSTV net (TBD) 6 pm
10 - Board of Directors meeting 7 pm
11 - 220 Mhz Monthly Net 8 pm
12 - 2 meter net (TBD) 8 pm
17 - General Membership Meeting 7 pm
18 - 6 meter net (TBD) 8 pm
19 - 2 meter net (TBD) 8 pm
26 - 2 meter net (TBD) 8 pm

April 2025
1 - 2 meter digital net (TBD) 8 pm
2 - 2 meter net 8 pm
5 - Social Saturday & Fox Hunt
8 - 220 Mhz Monthly Net 8 pm
9 - 2 meter net 8 pm
13 - 2 meter SSTV net 6 pm
14 - Board of Directors meeting 7 pm
15 - 6 meter net (TBD) 8 pm
16 - 2 meter net 8 pm
21 - General Membership Meeting 7 pm
23 - 2 meter net 8 pm
30 - 2 meter net 8 pm

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FOX CITIES AMATEUR RADIO CLUB, INC.

FCARC, PO Box 2346, Appleton, WI 54912
920-415-2ham (2426) - www.fcarc.club - fcarcw9zl@gmail.com

Membership Application

Date _____ ☐ New member ☐ Renewal

☐ Full / Associate / Retired ☐ Student

Call Sign _____ License Class _____ ARRL Member? ☐ Yes ☐ No

Name _____ Phone _____

Address _____

City _____ State _____ ZIP _____

Email _____

$20.00	_____	Full, Associate (non ham), Retired
$10.00	_____	Student School_____
Free	_____	New Ham (FCARC VE certificate required)
$5.00 each	_____	Additional Family Members
	_____	Donation (Optional)
Total	_____	

My Family Member is Joining or Renewing:

☐ New member ☐ Renewal

Call Sign _____ License Class _____ ARRL Member? ☐ Yes ☐ No

Name _____ Phone _____

Email _____

☐ New member ☐ Renewal

Call Sign _____ License Class _____ ARRL Member? ☐ Yes ☐ No

Name _____ Phone _____

Email _____

Note: Family members must reside at the same address

Note: Please see the treasurer for an ARRL dues form. Our club will receive a portion of those dues if you sign up or renew through us.

Fox Cities Amateur Radio Club, Inc. is a 501(c)3 non-profit corporation.
Your contribution supports our community service and public safety activities.
All donations are tax-deductible to the fullest extent of the law. Please consult your tax advisor.

Treasurer Use:

Amount Paid $_____
Check # or method of payment _____
Paid through 12/31/_____
Date Deposited _____

QuickBooks Updated _____
Website Updated _____
HamClubOnline Updated _____

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