



Official Publication of the
West Allis Radio Amateur Club

Hamtrix

Volume 74, Issue 10 October, 2025

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OCTOBER CLUB HAPPENINGS



**Meeting 7pm at new building
October 14, 2025**

Location: ([More info on page 4](#))

Hickory Grove Community Center

**2600 S Sunnyslope Road Rn 310
New Berlin**

Program

Dave Garnier, WB9OWN,

Bird Song Recognition Using a Raspberry Pi.

Mike W09B

Annual elections for club officers.

Premeeting dinner

New Berlin Ale House

5:15pm

16000 W. Cleveland Ave

West of Moorland Rd.

NUT NET
3.985mhz
Monday-Saturday
8:15am CT

WARAC 4th Tuesday
Breakfast
At the Forum
Layton & Hyw 100 at
8:30am

The Milwaukee-Florida
Net time is:
7:15 - 8:00AM Central
8:15 - 9:00AM Eastern
Mon through Sat

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MEMBERSHIP SCHOLARSHIP FUNDING PROPOSAL OCTOBER 2025 CLUB MEETING

In accordance with WARAC's rule and bylaws, expenditures in excess of \$250 need to be noticed in Hamtrix in advance of being presented to the membership for review, discussion and approval. Approval is sought from the membership to fund the 2026 David Knaus Memorial Scholarship as follows;

FUNDING AUTHORIZATION FOR THE 2026 DAVID KNAUS MEMORIAL SCHOLARSHIP

The Board has reviewed the following request and unanimously recommends approval by the membership

o Amateur Club, Inc., has awarded educational scholarships to outstanding qualified amateur radio college students, primarily from Wisconsin, to further their studies in technical related fields. Roughly 10 years ago, WARAC joined with the ARRL Foundation by establishing an endowment administered by the ARRL Foundation to better facilitate scholarship awards and actively manage the endowed funds. In addition to the endowed funds, WARAC maintains and manages a separate account earmarked solely for use in funding the annual scholarship as may be needed. On or about January 1st of every year, the ARRL Foundation reports on the financial status of the endowment fund and confirms with WARAC the desired scholarship award amount for that year. At times, the situation requires additional monies be forwarded to the Foundation. The requested confirmation typically has a very narrow response window which normally does not work well with our membership required approval process. As such this proposal is requesting prior authorization from the members for the 2026 scholarship so that we can better work with the ARRL Foundation process and timing.

FUNDING AUTHORIZATION REQUEST: WARAC will be authorizing a \$3000 scholarship amount for 2026. The normal endowed funding typically supports a \$2000 scholarship amount. We are requesting the membership approve a disbursement not to exceed \$1000 from the club's scholarship accounts for WARAC's portion of the 2026 scholarship.

September Sendik's Fundraiser

Thanks to all who Supported the event



Important!

The **Amateur Radio Emergency Preparedness Act** is making its way through Congress. This bill will ensure that licensed operators have the tools and access needed to stay ready and continue serving communities when disaster strikes. But Congress needs to hear from real people like you.

Here's how you can help:

1. Send a letter to your elected representatives. Fill out your letter of support by pointing your favorite web browser to <https://send-a-letter.org/hoa/>
Simply fill in your callsign and hit the "Send My Letters" button. These letters will be hand delivered to members of Congress



WARAC 4th Tuesday Breakfast

NOTE NEW LOCATION

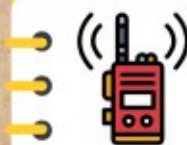
Several years ago there was talk among Nut Net members that we should get to meet each other. A breakfast get together idea was started. It was open to all hams, XYL/partners and anyone who wanted to learn about amateur radio. Even visiting OM/XYL couples joined us.

So, on the fourth Tuesday each month at 8:30 am we meet at [The Forum Restaurant](#), corner of [HWY 100 and Layton](#), [Greenfield, WI](#). Looking forward to seeing you, mark your calendar.

Phil, W9NAW

WARAC Find Us On The Air

VHF Simplex 146.55 Mhz & AllStar #63584



Looking for a Club Member to chat with? Fire up the VHF rig and give a shout out on the VHF Simplex Frequency 146.55 / Allstar 63584. You'll be surprised how often someone is listening. Hit the PTT and say "Hello"

DMR - BM TG 3155 WI State



The WI State 3155 TG is available on all the local DMR Repeaters AND via your HotSpot. Put yourself monitoring and come find a Club Member

Nut Net - Mon to Sat on 3.985 Mhz @ 8:15 AM



Join The Nut Net on 80 Mtr SSB from 8:15 to 9:00 AM Mondays thru Saturdays. Check-ins are from all over WI. You'll be a Nut Netter regular in no time. This is a general discussion net that gets your day started out right.

Milw - Florida Net - Mon to Sat 14.290 Mhz 7:00 AM



Join Tom, K9BTQ, for this early morning Check In Net, Mon thru Sat on 20M from 7:00 AM to 8:00 AM. Get the news to get your day started out just right.

Welcome to Hickory Grove



It's been a long time coming, but this month the cake is finally baked — we're in our new digs at the **Hickory Grove Community Center!**

A big thank-you goes out to the **City of New Berlin** for accommodating WARAC's meeting space needs. Special thanks to **Mayor Dave Ament** and the **Recreation Department** for making it all possible.

Our meeting room is on the upper floor

— The Lily Room #310.

In response to a couple of questions from last week's announcement email: no, I don't know why the floor numbers suggest a third-floor location when the building appears to have only two stories. It's a mystery. And really, who doesn't enjoy a good mystery?

This month's short program will be presented by **Dave Garnier, WB9OWN**, on Bird Song Recognition Using a Raspberry Pi. It's a great opportunity to put that underutilized RPi setup to good use — I know I've got some spare cycles to spare!

The **main event** will be our **annual elections for club officers**.

Before the voting, I'll share an update on the club's current status and direction — we've got a few things to chat about.

Regarding the election: there's an **open Treasurer position** that must be filled, but otherwise, our incumbents are running for re-election. That said, every position is open to members, so if you're interested in running, tossing your hat in the ring is always encouraged!

See you at the meeting!

New WARAC Meeting Location



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Location:

**Hickory Grove Community Center
2600 S Sunnyslope Road
New Berlin**

Located at the northeast corner of Sunnyslope Rd and Cleveland Ave, about ½ mile east of the old meeting place.



Meeting Room:

We will meet in the Lily Room, #310. The room is located on the upper floor.

Access:

The main entrance faces west toward Sunnyslope. When you enter, take either the nearby stairs or the elevator to the next floor up. The meeting room is well marked.

Called to order by Mike Johnson WO9B @ 7 pm.

SK Louie Golembiewski, W9GSV Passed away on August 22nd. A WARAC member since at least 1956,

Meeting place update: MJ – Starting in October. Hickory Grove @ South Sunny Slope Rd. & West Cleveland Av. Should be our new meeting place location.

October: Elections. Bill Reed is stepping down as club Treasurer. Think about running for any of the positions.

Presentation by Brain Ganiere, AD9AL - Milwaukee Astronomical Society “93 Years of Amateur Astronomy in Milwaukee, with a Connection to Amateur Radio.”

The Milwaukee Astronomical Society was formed in 1932 and operated from a West Allis back yard. In 1938 they moved to there current location. We learned about the different types of telescopes, astrophotography, and the use of radio in the study of the sky. We toured the grounds and were able to see many of there building and telescopes. With some of telescopes being operated. It was a cool night with a partly cloudy sky. The MAS website has more information about – Membership, more history, use of the site + telescopes by members. When open to the public.

Respectfully Submitted
Bill Dargis KD9BJZ
Secretary WARAC, September 9, 2025

Contest Corner and DX Report Michael Falk, AA9RK

In October, the contest season really starts to ramp up. **This weekend, October 11th and 12th, there are:**

State QSO parties (Nevada, Arizona, Pennsylvania, and South Dakota). Especially the Pennsylvania event brings lots of activity to the bands.

Regional CW contests (the Oceania DX Contest, the UBA ON [Belgium] CW contest, the QRP ARCI Fall QSO Party, and an SKCC Weekend Sprintathon)

One big phone event (Scandinavian Activity Contest, SSB)

and Digital events (Makrothen RTTY Contest, which is a worldwide event, plus the PODXS 070 Club's Great Pumpkin Sprint, which is a 160 meter only PSK31 event).

The following weekend, October 17th and 18th, there are some interesting events as well. First, you should check out the Illinois QSO Party. We are close enough to Illinois that you can work stations on 40 and 80 meters, and with the right propagation you might even be able to hit southern Illinois on 20 meters. The KA9FZR team will be mobile once again, representing WARAC with a mobile trip through our southern neighbor. KA9FZR will be driving and is the chief engineer, and WO9B, KD9NZB, and

myself will all take a shift in the op's seat. That's Sunday afternoon.

The rest of the weekend features the Walk for the Bacon (slow speed) and Run for the Bacon (fast speed) CW QRP contests, the New York QSO Party, the Stew Perry Topband challenge (160 meters CW only), the Asia-Pacific Fall Sprint on CW, and finally the Worked All Germany Contest (CW and SSB). The YLRL (Young Ladies' Relay League) also hosts their DX/NA YL Anniversary Contest, which is all modes and all bands (except WARC). Contacts with OMs don't count in this contest.

On the 24th through the 26th, there is a CW QRP event called the Zombie Shuffle. It runs Friday from 3PM-midnight local time. Zombies shuffle, they don't sprint. There is also a Classic Exchange CW event this weekend. But the marquee event this weekend is really the CQ Worldwide DX contest (SSB). There have been a lot of CW events to date in October; the SSB folks need something! This runs from 0000 Saturday (7 PM Friday night local) to 2359 Sunday (6:59 PM Sunday night local). It is truly a DX contest; you get no points for contacting stations within your own country. There will be thousands of stations on the air, and things can get extra exciting if the 15 meter (or better yet, the 15 and 10 meter) bands are open. Go to cqww.com for more information on this event.

November 2nd and 3rd bring the ARRL Sweepstakes, CW edition. Sweepstakes. It is wild. The exchange is wild (serial number, precedence, call sign, check, and section). The level of activity is wild. The amount of time you can operate is not really wild, but you can make a weekend of it. (You can operate at most 24 of the 30 hours between Saturday 4PM and Sunday 10 PM) The other weird rule in Sweepstakes is that you may only contact each station once (instead of once per band, as in most other contests). I'll see you there. There is also a Classic Exchange phone event that weekend, if CW is not your thing.

What DX is on the air? Well...

North Cook Islands: E51MWA will be QRV from Manihiki, a ring-shaped coral atoll south of Hawaii, October 9-20. They'll be on 160-10 meter CW, 80-10 meter SSB, and 160-6 meter FT8 Fox and Hounds (even including 60 meters).

Fernando de Noronha: PY0FB/PY0FBS will activate this island off Brazil in the South Atlantic from October 8-15. PY0FB will be on 80-6m SSB and some digital; PY0FBS is working 23 cm moonbounce.

Burkina Faso: This African nation is expected to be activated by a German op as XT2AW until October 28. Unfortunately his radios were confiscated at customs, but he has them back now. Try 80-10 m SSB/FT4 or the QO-100 Satellite.

Rodrigues Island in Mauritius: 3B9KW will be on the air for CQ WW SSB, and will also be on the air for the week prior as 3B9/M0CFW

See you next month,
-Michael AA9RK



October 2025

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Hamtrix

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By Michael Johnson, WO9B

Getting Started in Data Comms

As I was contemplating this month's article, and oddly several topics were competing for keyboard time, this article dropped into my inbox. It is well worth the read as it covers a lot of ground and does well at presenting a litany of up to date options. I've edited it for length and relevance, so if you want the unabridged version, there is a link at the bottom. If you've hit the wall in your amateur radio hobby, the VHF/UHF world is a hotbed for innovation and exploration. It has grown well beyond 90's packet radio BBS's and APRS tracking.

How To Get (Re) Started In Amateur Radio Data Communications

By Steve Stroh N8GNJ

A recurring theme I see on various discussion groups about Amateur Radio data communications is someone who used to be active in Amateur Radio data communications (usually, Packet Radio), often, decades ago, and wants to resume being active in Amateur Radio data communications.

Generally the request is to establish or re-establish local Amateur Radio data communications networks to communicate with like-minded Amateur Radio Operators that are located in the same area.

Motivations for their resurgent interest in Amateur Radio data communications vary widely, as do their expectations. There's no one, good, guide to the various options for Amateur Radio data communications in 2025 and beyond, so I thought I'd offer some general, high-level guidelines.

This article does not discuss Amateur Radio Over Internet (AROI) systems such as accessing repeater networks via Internet. If AROI is of interest, I recommend The [Random Wire Newsletter](#) by Tom Salzer KJ7T which provides excellent coverage of AROI and related topics.

This article also doesn't discuss some promising, but still nascent Amateur Radio data communications systems such as IP400 Network Project, MMDVM-TNC, and my SuperPeater concept.

What Not To Do - Legacy 1200 bps AFSK Packet Radio, Digipeaters, and Radios With Built in TNCs

I am a lover and a fan of legacy 1200 bps AFSK Packet Radio... but I really don't recommend using legacy packet radio as a starting point for Amateur Radio data communications in this era. Decades ago, 1200 bps AX.25 Packet Radio using Audio Frequency Shift Keying (AFSK), using legacy Terminal Node Controller (TNC) units such as the Kantronics KPC-3, was the best most users could do. 1200 bps AFSK works because you can connect a TNC a typical VHF / UHF FM radio's microphone and speaker connections and transmit data.

But doing so is generally not that satisfying an experience in 2025 because of the slow data speeds and it being error prone (many retries) and often frustrating to use. We can do better in 2025, which I'll discuss below.

Very briefly, while Packet Radio digipeaters (typically 1200 bps) can be used for creating networks, data communications use (longer packets for exchanging emails, file transfers, etc.) can quickly saturate a digipeater, and thus result in an unsatisfying experience.

Similarly, it's been widely observed that the radios which incorporate "TNCs" are generally usable only for short packets used for Automatic Packet Reporting System (APRS) communications. Like digipeaters, built-in TNCs can quickly get overwhelmed by exchanging emails, file transfers, etc.

New Packet Radio

Despite the name, **New Packet Radio** (NPR) has no commonality with legacy Amateur Radio Packet Radio. Unlike AREDN, NPR operates on the Amateur Radio 420-450 MHz band, requiring a minimum 100 kHz channel (for 100 kbps raw throughput), and up to a 1 MHz channel for 1 Mbps raw throughput). Like AREDN, NPR supports TCP/IP (IPv4). Thus many Internet technologies and applications can work with NPR, if the technologies and applications are "patient" to allow for the higher latencies inherent in NPR operating half-duplex.

NPR is a bit easier to set up than AREDN because it operates on the Amateur Radio UHF band, thus antennas are easier to aim and paths on UHF are a bit more robust than microwave "must have an optical clear line of sight".

An **ARDC grant in 2024** might make NPR even more capable to operate on the 144-148 MHz and the 1240-1300 MHz Amateur Radio bands.

VARA HF, VARA FM, and VarAC

VARA HF and VARA FM are widely used and supported in Amateur Radio emergency communications systems and networks such as Winlink. VARA FM is rapidly displacing legacy packet radio systems. VARA is largely superior to legacy AX.25 Packet Radio in almost every way other than it is a proprietary

system, operating only on Windows PCs, and requires payment of a license fee for full performance.

Because of that close association of VARA FM and VARA HF with emergency communications use, many Amateur Radio Operators think that is the only or primary use of VARA FM and VARA HF... but that's not the case at all. Like legacy Packet Radio communications, VARA FM and VARA HF can be used casually, individually or in a group without the intent of emergency communications.

A full description of the merits of VARA HF and FM are beyond the scope of this article, but a quick web search will find many good explanations and presentations about setting up and using VARA systems, especially for emergency communications use. On VHF / UHF, VARA FM can be used with a typical VHF / UHF FM radio with typical microphone / speaker connections, and almost any audio interface such as the popular Tigertronics Signalink USB units. If an optimized radio and audio interface is used, such as a Kenwood TM-D71A and a Masters Communications Digital Radio Adapter, speeds of up to 25 kbps can be achieved using a typical 12.5 kHz VHF / UHF channel.

One impressive capability that differentiates VARA FM significantly from legacy Amateur Radio Packet Radio is that VARA FM "negotiates" between two VARA FM stations for best common speed. For example if a station set up for "VARA NARROW" (maximum data rate 12 kbps) attempts to communicate with a station set up for "VARA WIDE" (maximum data rate 25 kbps), the two stations will negotiate that 12 kbps is the best common speed between those two stations and complete the communication at 12 kbps. Thus both fast (WIDE) and slower (NARROW) VARA FM stations can share the same channel, unlike legacy Packet Radio 1200 bps and 9600 bps stations, which will don't recognize the two different types of transmissions.

In addition to the higher speeds possible with VARA FM, VARA FM implements Forward Error Correction for a more robust connection. Thus frustrating retries for single bit errors are largely avoided.

VARA FM can also be used on a conventional FM repeater for implementing a wide area network.

VarAC is a separate, companion application which operates in conjunction with VARA FM or VARA HF, offering email, bulletins, file transfers, text chatting, and many other modern communications capabilities.

For setting up a local data communications system with conventional Amateur Radio VHF / UHF radios, the use of VARA FM and VarAC has a lot to recommend it.

Modern Amateur Radio Packet Radio

Amateur Radio Packet Radio certainly has not gone away in the modern era, and indeed Amateur Radio Packet Radio is more capable than ever... as long as one knows about the more modern, more capable implementations of Amateur Radio Packet Radio.

KISS

The major differentiation between legacy Amateur Radio Packet Radio and modern Amateur Radio Packet Radio is that the latter now use the “**KISS**” **protocol**. That is, unlike legacy Packet Radio TNCs, all networking functionality is handled in software operating on a host computer, not in the TNC unit.

Faster Data Speeds

Modern Amateur Radio Packet Radio units can operate at faster data speeds than 1200 bps even with conventional radios. For example, many radios, even when microphone and speaker connections are used, can support data speeds of 2400, 3600, or 4800 bps. 9600 bps and even faster data rates can be used with some combinations of radios (using “flat audio” interfaces) and “high fidelity” audio adapters.

These speeds make Amateur Radio Packet Radio a lot more usable than 1200 bps data rates. Some legacy Amateur Radio Packet Radio TNCs supported those data rates, but were implemented with hardware modems which were (in a word) very “fussy” and overall weren’t all that usable in real world conditions.

Forward Error Correction

One of the biggest change in modern Amateur Radio Packet Radio is the addition of Forward Error Correction (FEC). There are two FEC systems in use for **FEC - FX.25 and IL2P**. FEC makes Amateur Radio Packet to be far more usable as single bit errors can be fixed without requiring a retransmission of an entire packet. This makes 9600 bps Amateur Radio Packet Radio actually usable in real world conditions.

Dire Wolf

The Dire Wolf Software TNC incorporates all of the aspects of modern Amateur Radio Packet Radio. One of the most significant improvements that Dire Wolf implements in Amateur Radio Packet Radio is a unique automatic, internal correction for many / most single bit errors. When Dire Wolf receives a packet with a Cyclic **Redundancy Check (CRC)** error, it implements a unique “big flipping” technique that selectively, intelligently “flips” most of the bits in a packet and then tests to see if as a result of that single bit flip, the CRC error is fixed. This one technique dramatically improves the overall reliability of Amateur Radio Packet Radio communications when Dire Wolf is used.

Beyond its incorporation of “big flipping error correction, Dire Wolf is open source software, and is thus embedded in a number of Amateur Radio Packet Radio systems (see below). Dire Wolf provides a KISS interface, faster data speeds, and both FX.25 and IL2P FEC. It’s typical to use Dire Wolf on a modest Raspberry Pi computer, including the Raspberry Pi Zero 2 W.

BBS

Amateur Radio Packet Radio Bulletin Board Systems (PBBS) are becoming

increasingly popular again as a “water hole” for asynchronous communications amongst small groups of Amateur Radio Operators. The most popular and capable PBBS is **G8BPQ Mail Server**.

It’s just kind of fun to use a PBBS in this era, especially when you can access it at higher speeds and reliability possible with modern Amateur Radio Packet Radio and VARA FM (which offers a KISS interface).

TNC4

The Mobilinkd TNC4 is another modern TNC which provides a KISS interface and 1200 bps / 9600 bps data speeds. It does not offer Forward Error Correction. To support its intended use with portable radios, the TNC4 has an internal battery, and can be connected to the host computer via Bluetooth.

DigiPi

DigiPi is a combination of integrated Amateur Radio Packet Radio software and hardware, with several options for the hardware. A unique aspect of DigiPi is that it is designed to be operated remotely on a computer, tablet, or even phone using a web browser. Thus DigiPi can be set up in an unobtrusive location and then operated via the household Wi-Fi network (DigiPi does not require Internet access). DigiPi uses the Dire Wolf Software TNC, and offers a number of optional other Amateur Radio data communications capabilities.

This article is reprinted with permission. It was first published in Zero Retries newsletter, issue Zero Retries 0222. Oct 4, 2025 - <https://www.zeroretries.org/p/zero-retries-0222>

Editorial

Interesting Data article From Mike WO9B on modern Data transfer. Just one of the many paths Ham Radio has for us, if we get bored with the hobby.

At this time we are almost ready for our Mobile operation for Illinois QSO party. It has become our shake down party to check equipment for the Wisconsin QSO party.

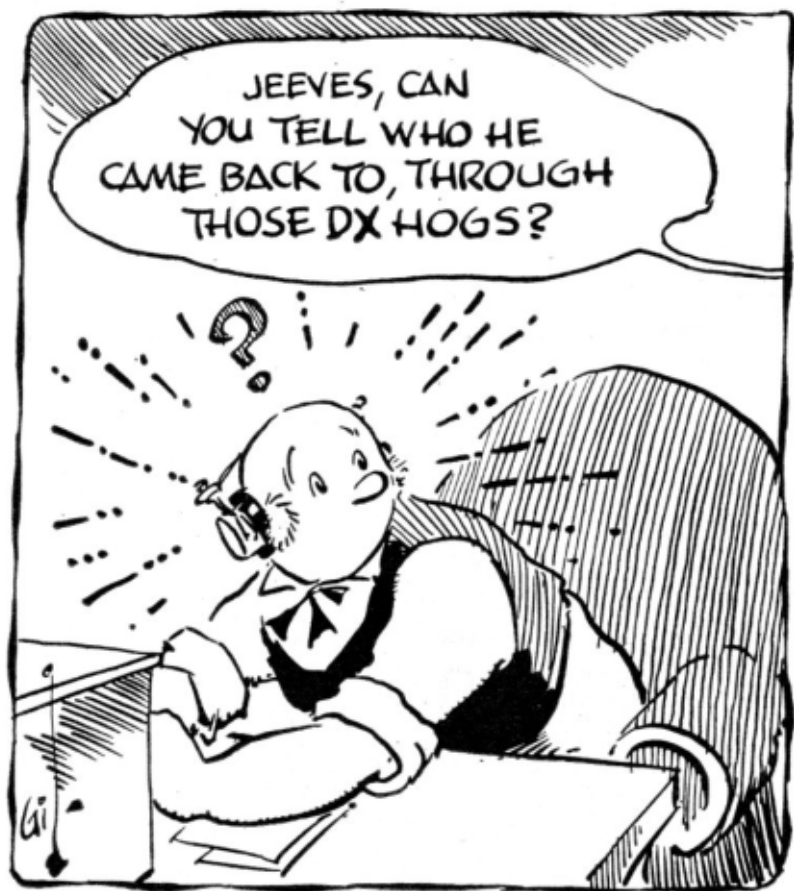
At the end of this year's WQSO party my Screwdriver antenna required an overhaul. The finger springs that connect the bottom tube to the coil had broken. Got the old finger springs out after some heavy duty work with hammers and replaced the old springs. Got it together and we have tested it a couple times on park activations. Back to it's normal self!

With the help of Mike WO9B we winterized and repaired mywire and tri-band antenna. So with a little luck they will be fine all winter.

As reported at the last meeting our September SENDIK'S fund raiser was a success. Thanks to all the people who came out to support us.

73

Frank KA9FZR



2024 Challenge for our membership. Have someone you meet, Ham or Ham wannabe come to a meeting this

DON'T KEY LIKE A PHONE MAN



SLOW SPEED CW QSO NET

Monday's - 8:00 PM - 146.55 Simplex and AllStar Node #63584

CW Practice

One of the best and maybe the only way to get better at CW is practice. Having someone else who also wants to practice also helps. Just makes it more fun.

The West Allis Radio Club is going to try to help. We are running a CW practice net on Monday at 8pm The repeater is 147.045+ 127.3 the CW portion is on HF

Mike WO9B has been joining me and setting up some practice but we are open for suggestions on where to go with this. Come join us.

Officers and Board
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Mike Johnson WO9B

Vice-President
Pierre Porter KD9SSY

Treasure:
Bill Reed N9KPH

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Bill Dargis KD9BJZ

Committee member(2)
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