



Official Publication of the  
West Allis Radio Amateur Club

# Hamtrix

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Volume 74, Issue 6 June, 2025

## JUNE CLUB HAPPENINGS



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

**Meeting**  
**Tuesday June 10, 2025 7:00 pm**  
**Community Center**  
**14750 W. Cleveland Ave.**  
**New Berlin, WI**  
**Between Moorland and**  
**Sunnyslope**

**Presentations**  
**Field Day David Garnier**  
**WB9OWN**  
**WI QSO Party Chuck Dellis**  
**W9WLX**

**Premeeting dinner**  
**New Berlin Ale House 5:15pm**  
**16000 W. Cleveland Ave**  
**West of Moorland Rd.**

**2025 ARRL Field Day**  
**June 28th**  
**Colonel Heg Memorial Park**

**Sendik's Grill fundraiser**  
**September 6, 2025**  
**11:00 to 4:00 pm**  
**At the New Berlin store**

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## 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.

## Field Day!!

Of course being June, it is Field Day time. The weather is coming around nicely. The club is moving ahead with a similar plan as last year with a Saturday only, all battery powered multi-station setup.

If you can't make the clubs op, make sure you get on the air somewhere and toss some Q's around. I'll be heading up to the UP of MI again without a big plan. I'll be hanging out in the Marquette area on a picnic



table or rock outcropping. It should be good time regardless of the weather. It can't rain the whole weekend...right?

We are back to our regular schedule for the monthly meeting. Doors open at 7:00, but of course you are encouraged to stop by the New Berlin Ale House for dinner around 5:15 or so. We have two presentations this month: Field Day final information by Dave, WB9OWN who will bring us up to altitude on the big event. Also, we will the WI QSO Party wrap up by Chuck, W9WLX. I'm looking forward to the inside story.

Oh, and I want to thank the members that participated in the May Sendik's Grill Fundraiser. We will have the detail for the meeting, but it was a cool and windy day, which made for some challenges. As usual, the Sendik's folks did a first class job of hosting our effort. We've done enough of these that we really have the process down. Big Thanks to all that made it fun and of course helped the club.

See you Tuesday.



## WARAC General Meeting Minutes - May 13, 2025

Called to order by Mike Johnson WO9B @ 7 pm.

**Attendance:** 21 Member's, 1 Visitor.

**April's - General Meeting and Board Meeting - Minutes - Approved.**

**Treasurers report Bill N9KPH:** Income \$294, expenses none, checking ~\$7200, general CD \$5500.

**Meeting place update: MJ** - No information.

**Sendik's** - May 17, September 6. At the New Berlin Location. May sign up sheet was passed.

**Fred Fest** - Waukesha Elks May 17<sup>th</sup> Fund raiser, Band (AA9RK) 6:30-8:30 Shake Down.

**DXQSO Team is working on a DX Social program.** They are looking for people to play with it and give feedback. .

**WIQP** - Chuck W9WLX: Results are done and published. Certificates have been sent out. The 8 plaques still need to be made and shipped. Full report at June meeting.

**Ozaukee Radio Club Swapfest** April 26<sup>th</sup>, Dayton is May 16<sup>th</sup>,17<sup>th</sup>, Green Bay Ham Fest May 31<sup>st</sup>.

**CAP Fox hunt:** Still looking for a date on the calendar.

**Presentation** - Rick WA9JBQ - POTA 2025 Adventure Begins.

Parks on the Air started in 2016 with a National Parks Service event, has expanded to what it is today. Only Federal/State parks, wild live areas can be activated. County and City parks do not count. Rick has planed a 2 week trip for this month. To pass through Montana, Wyoming (Yellowstone), Idaho, Utah, Nevada, Colorado and do POTA along the way. You need 10 QSO's to activate a location. With the lack of internet, Cell service. He plans to use StarLink for internet access. To self spot on the POTA and other websites. Plus access to map and other stuff. Showed his StarLink mini. 50G/month plan is \$50, \$1G after. Which he can activate for the month he wants to use. StarLink uses a lot of power, need to run the engine. He showed the Pota website. Self spot, maps and park numbers, his logs. Rick uses HAMERS to log and upload to the pota website. Plans to use his Yaesu FT-710 and a Chameleon 17 ft whip with 2 raised radials with spade connectors to adjust length, @ 90° for directional control.

**Field Day:** Update Dave WB90WN: June 28 @ Colonel Heg Memorial Park - Wind Lake, Norway. Arrive 9AM to start setup. 3 Transmitters. 40M, 20M (phone,cw), 15M Dave. 10M and maybe 2M, Gill, Donna. Bill R. Food. Carla coffee. Paul and Phil bringing spud guns. And another FD meeting next month before FD.

Meeting Adjourned at 8:18 pm.

Respectfully Submitted

Bill Dargis KD9BJZ

Secretary WARAC, May 13, 2025

## Contest Corner and DX Report

### Michael Falk, AA9RK

I don't know about you, but I can't wait for summer vacation. Getting through May has been the hardest of hard pushes at school. I am starting to think about retirement, because so many of my ham radio friends highly recommend it. I figure I should be ready and able in two or three more decades. But enough about me. You know what to know what's on the air in June.

**June 7<sup>th</sup> and 8<sup>th</sup>**, there is a lot to keep you busy on the air. There are CW contests. The Tisza Cup CW contest, with extra points for working hams in countries where the Tisza river flows, Ukraine, Slovakia, Hungary, Romania, and Serbia, runs on June 6<sup>th</sup> and 7<sup>th</sup> local time. The IARU Region 1 Field Day event (CW) is that weekend as well, along with the Kentucky QSO Party and the Atlantic Canada QSO Party. There are two digital events, the 10-10 International PSK event and the ARRL International Digital Contest, for all digital modes except RTTY. Expect a lot of FT4/FT8 in this event.

**On the 14<sup>th</sup> and 15<sup>th</sup>**, there is a South American CW event running for 24 hours, and the ARRL June VHF Contest running for 33 hours from Saturday afternoon until Sunday night. This is actually a VHF+ event (also including UHF and microwaves), and is probably the marquee event of the VHF year. Sporadic-E propagation combined with high activity levels in this event can make for some fun operating conditions. This event has not (yet) embraced the rules change you see in the sprints, that stations are allowed to be contacted once per band per mode instead of just once per band. This means that this event will probably be mostly an FT8 event once again (while the sprint events are encouraging people to use both digital and analog modes). There is a separate Analog Only entry class, but almost anyone making a serious effort in this contest is going to have a substantial digital presence. Goodness me, I get worked up about these things. I operate VHF+ digital too, but it comes at the expense of every other mode, and I am very excited to see how the rules changes in the other events brings some more life to the VHF bands.

**ARRL Kids Day (not really a contest)** is on the air June 21<sup>st</sup>, along with a Feld Hell sprint (for those interested in that particular digital mode), an SKCC (Straight Key Century Club) QSO Party (obviously a CW event), the All Asian DX Contest (CW also), and the West Virginia QSO Party.

**Field Day** runs for 24 (or 27, depending on your entry class) hours on June 28 and 29. Pretty much the only other thing on the air is the His Majesty King of Spain contest (SSB edition), which is a great event in its own right. We hope to see you at Colonel Heg Park out in the town of Norway (Racine County) for our WARAC Field Day event. You're on your own for King of Spain.

**Here's a different take on how to do VHF contests:** the CQ WW VHF event, interestingly, is splitting into two contests, one digital and one analog. The digital version is July 5 and 6. It is 6m and 2m only, CW, SSB, and FM.

## Here are your JuneDXpeditions:

**Faroe Islands:** OY6A (and some other call signs) are active from the Faroes, midway between Scotland and Iceland in the North Sea, until June 10<sup>th</sup>. 160-6 meters, all modes, and participating in the ARRL International Digital Contest.

**Bora Bora:** FO/G0VJG is QRV from June 12<sup>th</sup> through 28<sup>th</sup> in French Polynesia in the South Pacific. High power, beam antennas, 160-6 meters.

**Vanuatu:** Speaking of the Pacific, YJ0RS is on the air June 11-28<sup>th</sup>. The main goal is making 6 meter FT8 and moonbounce contacts with possible 10 meter operation too.

**Ogasawara:** JD1BQP is activating this southern Japanese island again, focusing on 6 meters but also some higher frequency HF bands, from June 15-22.

See you next month,

-Michael AA9RK



# What is the Moonbounce (EME) communication technique?

7

Posted April 8, 2023

Updated August 1, 2023

By Ham Radio FAQ

Moonbounce, also known as Earth-Moon-Earth (EME) communication, is an advanced amateur radio technique that involves bouncing radio signals off the Moon's surface to communicate with other stations on Earth. This method allows radio operators to make contacts over vast distances, even thousands of kilometers, without relying on traditional propagation methods such as ionospheric reflection or satellite relays.

## **Here's an overview of the Moonbounce (EME) communication technique: How it works**

In EME communication, a radio operator transmits a signal towards the Moon, which reflects the signal back to Earth. Another operator, located far away, receives the reflected signal. This process requires precise timing, antenna pointing, and signal processing to overcome the significant path loss and signal degradation caused by the long journey to the Moon and back.

## **Frequency bands**

EME communication typically takes place on VHF, UHF, and microwave frequency bands, where the Moon's surface reflects radio signals more efficiently. The most popular bands for EME are the 2-meter (144 MHz), 70-centimeter (432 MHz), and 23-centimeter (1296 MHz) bands.

## **Equipment**

## **EME communication requires specialized equipment, including:**

**High-gain antennas:** Large, directional antennas, such as Yagi, parabolic dish, or array antennas, are necessary to focus the transmitted signal towards the Moon and capture the weak reflected signals.

**High-power amplifiers:** Due to the significant path loss associated with EME, high-power amplifiers are needed to increase the transmitted signal strength and improve the likelihood of successful communication.

**Low-noise preamplifiers:** Low-noise preamplifiers on the receiving side help amplify the weak reflected signals while minimizing additional noise.

**Accurate antenna pointing:** To ensure accurate antenna pointing, operators use computer-controlled antenna rotators and tracking software that takes into account the Moon's position, elevation, and azimuth relative to the operator's location.

## **Modes of communication**

EME communication typically uses weak-signal modes, such as CW (Morse code) or digital modes like JT65 and QRA64. These modes have been specifically designed to



decode and interpret weak signals, even when they are below the noise level.  
Challenges

**EME communication presents several challenges, including:**

**Signal path loss:** Due to the long distance and the Moon's irregular surface, EME signals experience significant path loss, which can exceed 250 dB.

**Doppler shift:** As the Earth and the Moon move relative to each other, the frequency of the reflected signals shifts, requiring operators to adjust their transceiver frequency accordingly.

**Polarization:** The polarization of radio signals can change as they reflect off the Moon, making it necessary to use circular polarization or dual-polarization antennas to maximize signal reception.

Despite these challenges, many amateur radio operators find EME communication to be a rewarding and fascinating aspect of the hobby. The thrill of making contacts by bouncing signals off the Moon, combined with the technical challenges and achievements, makes Moonbounce communication an exciting pursuit for experienced radio enthusiasts.

Found on the web <https://hamradiofaq.com/kb/advanced-topics-and-specializations/what-is-the-moonbounce-eme-communication-technique/>







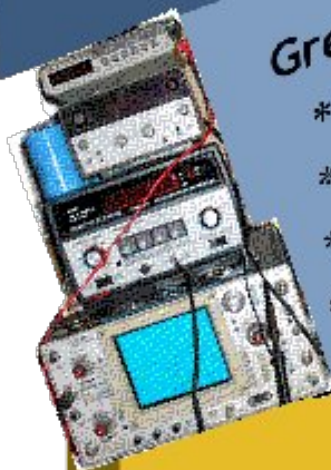
**FCARC**  
FOX CITIES AMATEUR RADIO CLUB, INC.



# Sunshine Swapfest

Great event for enthusiasts of

- \* Amateur Radio items
- \* Computers
- \* Electronics
- \* and other related miscellanea



**Vendors/Sellers  
Need To  
Bring Your Own  
Tables, Chairs, and  
Canopies**

Contact: Carol Young  
W9PIO2024@gmail.com

## Saturday June 21<sup>st</sup>, 2025

**New Convenient Location  
Off Interstate 41**

**Sunnyview Expo Center** Parking Lot#2  
500 E County Rd Y, Oshkosh, WI 54901  
\$6 Entrance Fee  
7:00 AM – 12:00 Noon

**Come Buy or Sell**



May 2025 \* Hamtrix \* By Michael Johnson, WO9B

## Multi-Network Digital Voice: EASY!!

My interest in DMR has kind of languished over the past year or so. I had fallen into the habit of monitoring my State Wide Talk Group (WI 3155) which had become a digital ghost town. Naturally, given my lazy habit, I extended this lack of activity to all of DMR and just quit exploring and reaching out. With no evidence whatsoever I just declared DMR to be dead and buried,

Boy was I wrong!!

I can't point to any one thing, but over the past few months, I've been on a tear with my DMR radio and MMDVM hotspot. While indeed my state DMR talk group may be the last chance gas station on the DMR trail, by no means is that the case for Digital Voice networks. If you take notice of various articles, blogs, websites, podcasts, YouTubes....there is no end of nets, discussions, events, etc that take place on the DMR, D-Star, Fusion modes spread out on all the networks: BrandMeister, DMR+, XLX, YSF, FCS, TGIF, FreeDMR and yet even more. All it takes is a bit of an explorer spirit and the wherewithal to set out on the digital highway and check it out. It is a crossmode digital world these days, and a lowly, and cheap, DMR radio can be your ticket to ride.

Which brings us to the wherewithal part: The Multi Mode Digital Voice Modem (MMDVM). AKA a hotspot. If you've got a digital voice capable radio, usually sooner than you think, you'll end up with some form of MMDVM device which is the access portal to the multi-verse of Digital Voice. For years, MMDVMs typically ran a version of Pi-Star. For the most part, you'd set up your hotspot to access your network of choice: DMR=BrandMeister, Yaesu=Fusion, Icom=D-Star. As things worked out, creatives started crosslinking the various modes and networks so that today, DMR/Yaesu/Icom radios are all talking to each other crossmode/crossband all over the DV world. Ain't it grand.

For Pi Star hotspots, this opportunity turned out to be a bit complicated. The Pi Star solution involved editing files and talk group re-write code, not to mention the need to modify your code plug. None of this was exactly trivial. Depending on your desires, it could be a lot of work. Responding to this challenge, WOCHP a few years back wrote an upgrade software package named WPSD. In addition to a slick interface and smoothed over

user experience, the software was designed to support crossmoding, i.e. the re-write rules were already in place. You only needed to activate the modes via check box (for the most part) to gain access to 5 or so concurrent networks. You still need to adjust your code plug, but that is relatively easy with current CPS software or even through manual keypad entry.

Let's take a look at my relatively old (5 years??) simplex MMDVM modem which sits atop a RPi Zero 2W. The DMR Status window on the main web page shows that I have activated BrandMeister, DMR+, TGIF, XLX and YSF. I normally monitor 3 talk groups on BM and 1 on TGIF all the time (WI 3155 and MI UP 31268). If anyone activates them, I'll hear it as long as I have a radio on. DMR+, XLX and YSF I use to participate in nets or podcast talk-arounds or one off type events.

DMR Status	
TS2	Enabled
DMR ID	3155449
DMR CC	1
DMR Masters	
BM 3102 United St...	
DMR+ IPSC2-AMERIC...	
DMR2YSF Cross-Mode	
TGIF Network	
XLX Not Linked	
YSF Status	
Not Linked	

Access to the various networks, except XLX, is by modifying the talk group ID number. Typically talk group ID's can be as long as 6 numbers, with most being 4 or 5 digits long. BM is the base system on WPSD so those talk groups are accessed by their ID number directly. The WSPD rewrite convention requires 7 digits with TGIF starting with a "5", DMR+ a "4", YSF a "7". As an example, the BM State of WI talk group is TG 3155. The TGIF State of WI talk group is 5003155. These are NOT the same talk groups, but both TGIF and BM use the same talk group number, 3155, for their State of WI TG. Why do something so confusing? Maybe the thought was they would coexist as linked buddies in the DMRverse, but that did work out that way.

So now that my hotspot is fully armed with enough networks to keep me busy, I am happily ranging around the talk group universe listening in and participating in all sorts of QSO's and nets. I'm using my DMR radio quite a bit more these days. Switching networks is mostly a matter of punching in talk group numbers.

To be fair, I am making this out to be a simple matter of turning your DMR/Fusion/D-Star radio on and then boom you are a network master. That is not the case. There is a learning curve involved, but it is certainly a trail that is well established and clearly marked. With a bit of orientation and desire, this is well within any ham's reach. Of all the modes available to us as operators, the DV modes qualify as being active 24/7. There is always someone on somewhere.



# Stamp Prices Jump on July 13, 2025

by Rich Regent

On July 13, 2025, one-ounce First Class mailing goes from 73 cents to **78 cents**, almost a **6.8 percent** increase. A year has passed since the last price increase. For an average family, postage will cost \$39 annually to send an assortment of 50 letters, holiday greetings, birthday cards, Christmas cards and to pay bills by mail.

**International Mail** which is \$1.65, flies up to \$1.70. **Metered Mail** jumps from 69 cents to 74 cents. The **Additional Ounce** price for a single-piece letter increases from 28 cents to 29 cents. For example — two ounces will be \$1.07 and three ounces is \$1.36.

Remember penny postal cards? The new **Post Card** postage will increase from 56 cents to 62 cents. For more price changes see the Price Tables that are available on the Postal Service's website: <https://pe.usps.com/PriceChange>.

USPS explains that as changes in the mailing and shipping marketplace continue, these price adjustments are needed to achieve the financial stability sought by the organization's **Delivering for America 10-year plan**. This plan includes \$40 billion in capital investments during ten years, which is \$15 billion more than in the USPS base capital plan. This capital will pay for better package processing networks, facility space upgrades and procurement of new processing equipment. Assuredly, USPS claims that their prices remain among the most affordable in the world. The Postal Service is also seeking price adjustments for Special Services products, including **Certified Mail** and **Money Order** fees. Usually, the bigger the city, the more expensive are the **Post Office Box** rental fees.

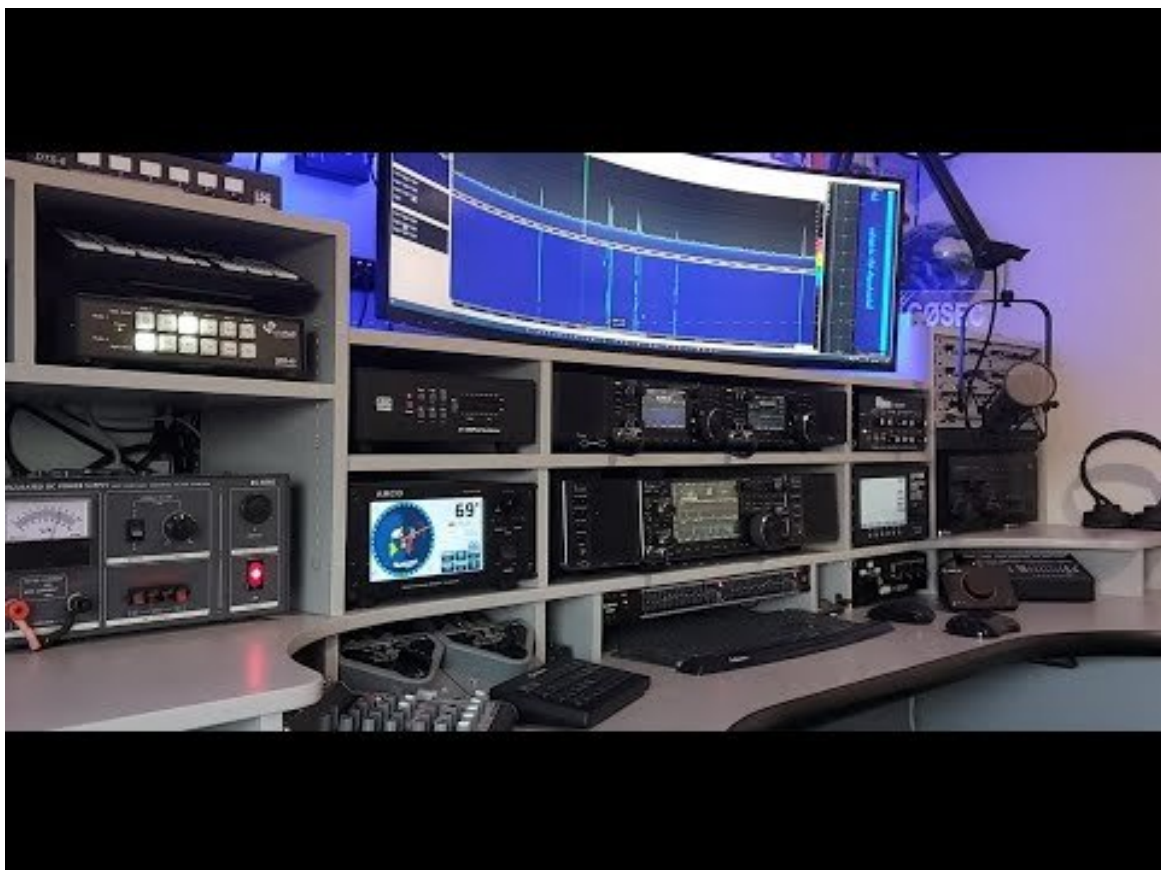
Imagine this concept — to mail a regular one-ounce envelope it will take 26 commemorative-sized 3-cent stamps. Those many stamps will cover an area on the envelope of about 6-1/2 by 6-1/4 inches to complete the 78-cent new rate. Of course there needs to be space for Shipping To and From addresses. Such a crazy envelope would have to be bigger than an envelope qualifying for the one-ounce rate, since the one ounce envelope maximum size is 6-1/8 by 11-1/2 inches. So to be practical, we must use higher denomination stamps in the mix, because overlapping stamps or sticking extra postage on the back of an envelope is not USPS approved.

If you pay bills by mail, consider changing to online banking and payments. Also, the Internet includes free e-mail and greeting card features to stay in touch with associates, friends and relatives. **Forever** and **Globalstamps** never expire and can be used on any one-ounce letter at any time, no matter the current price. Check the Internet for bargains or buy stamps from Stamp Dealers at local Stamp Shows. Dealers with large stocks on hand may sell stamps at a discount from their face values. Hopefully, with electronic methods, a supply of discount postage and previously purchased Forever and Global stamps, you may not be overwhelmed by these new mail price increases.





**We have come a long way**



**EDITOR**

Another month and the weather seems to be starting to look like “operation outside”. Always a good time after looking at the walls of your shack.

Of course ham shack can have many meanings. First thing that comes to mind is your own private building i.e. shack. This can have a wide range of options from heating to being powered by solar power. Not everyone is lucky like that. Most of us have found places to set up equipment and make it our own.

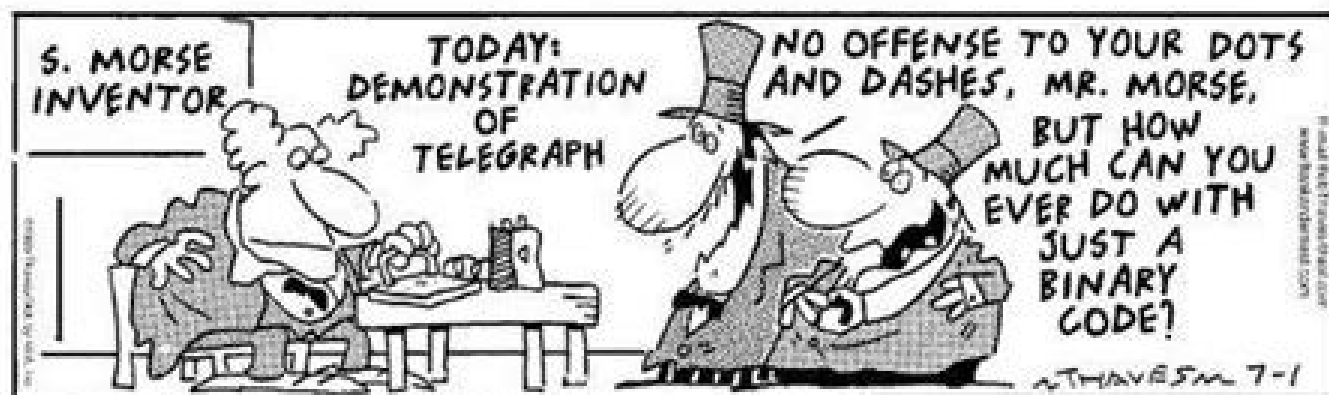
My main shack is in the basement in what was a bedroom crowded with books etc. Still is usable. Next is just outside the main shack room for an Amplifier I’m testing for a friend also a work bench. Multiple use. The third one that is connected to my main antennas is the kitchen where I can listen and talk to the morning nutnet while preparing breakfast for Judy and me.

One more option I have is a picnic table where I leave a portable antenna lead run to the patio. Works fine with a QRP radio and I get to be outside.

With modern equipment I could set up remote operations and just move a tablet or something. The Yaesu FT-891 is compact enough so I’m ok with what I have.

Everyone enjoy the nice weather wherever your shack is.

Frank Ka9FZR



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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

Secretary:

Bill Dargis KD9BJZ

Committee member(2)

Jeff Pahl W9JSP

Tom Macon K9BTQ

Past President:

Feroz Ghouse WU9N

Newsletter Editor

Frank Humpal, KA9FZR

fhump@milwpc.com

West Allis Radio Amateur Club  
P. O. box 511381  
New Berlin, WI 53151-1381

West Allis Radio Club  
PO Box 511381  
New Berlin, WI 53151-1381