

Official Publication of the West Allis Radio Amateur Club

Hamtrix

click here to go to web site

Volume 74, Issue 4 April, 2025

APRIL CLUB HAPPENINGS

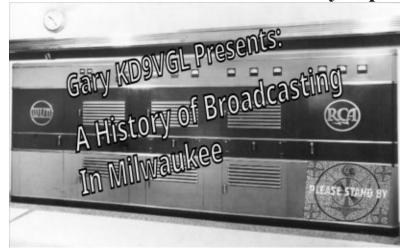


NUT NET 3.985mhz Monday-Saturday 8:15am CT

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 March 11, 2025 7:00 pm
Community Center
14750 W. Cleveland Ave.
New Berlin, WI
Between Moorland and Sunnyslope



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

> Sendik's Grill fundraiser May 17, 2025 September 6, 2025 11:00 to 4:00 pm At the New Berlin store

Index

The pre shack3	Digital Digest 10
	WI QSO party11
Contest & DX5	from editor14
Hamfest7	Slow Speed cw15



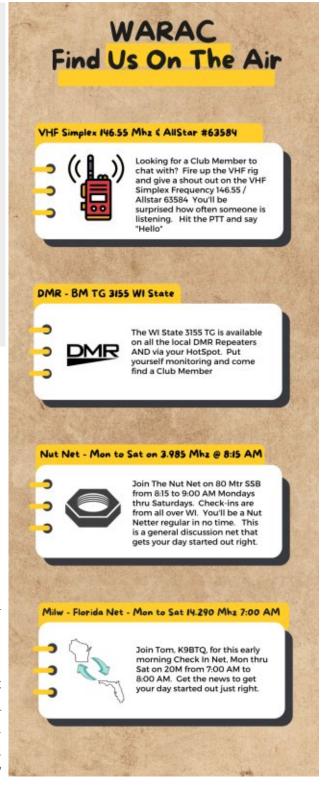


WARAC 4th Tuesday Breakfast

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.





Shoulder Season

always associated "shoulder season" with tourist locals. Montana in Sept. Florida in Nov. DC in Oct. The UP in May. By the way, DC in Oct is a great time to visit. There are no lines anywhere. Just saying. I never thought of MKE as having a shoulder season, but I'm coming around to the idea and the Mar/ April seems like the best candidate.

This is the time of year where you want to get outside and shake off winter, but geez....it just sort of, kind of, keeps hanging around like an unwelcome house guest. But alas, one of the saving graces is my ham radio

hobby. Turns out late winter and early spring is a great time to play radio. I've snuck in a couple of park activations, though they were mostly operated from inside the car. The bands, for the most part have been really good, not just propagation wise but pretty quiet as well. A nice time to work DX. Projects are also taking my attention. I'm refreshing an old amp at the moment which is, thankfully, just about done. I'll be moving on to a new remote radio setup and I've even got a couple of antenna ideas that need some flushing out. Staying busy is not a huge problem. Prioritizing certainly is however.

To the club, looking forward to the meeting presentation this month. Gary, KD9VGL will be sharing his personal version of Milwaukee Broadcast history. He has been up and over his waders in the broadcast business and has a real insider's view to share. Can't wait. We also have a surprise raffle item to share this month: A NanoVNA with 4" screen...perfect for my eyes, that's for sure. So help the club just a bit by stuffing the envelope and maybe you get a really neat shack tool.

Don't forget to join the group for dinner in advance of the meeting. For those that haven't been there before, anywhere from 6 to 10 show up around 5:20ish or so. The hour goes by incredibly fast and the good folks at the New Berlin Ale house do a great job of getting us out in time. See you Tuesday.

WARAC General Meeting Minutes – January 11, 2025

Called to order by Mike Johnson WO9B @ 7 pm.

Attendance: 25 Member's.

Lynn Tamblyn K9KR – SK - February 22, 2025

WIQP – How many participated. There was a good show of hands. Mike Johnson, Frank, Max did CW mobile together and had a lot of fun. Chuck Dellis said they received 300 logs as of today.

Meeting Minutes – Approved.

Treasurers report Bill Reed: \$24,107. ~ Split between General fund, Scholarship fund. Bill is moving most of the Scholarship fund into a Charles Swab conservative fund. CD rates rates coming down.

Sendix's – Frank: The 2 dates for 2025 are May 17 and September 6. At the New Berlin Location.

Field Day – Dave G.: June 28. Planning a 3Tx, 1 day only operation @ Colonel Heg Memorial Park-Norway. More planning meeting to be announced soon. Arrl released the 2025 logo for Field Day.

Next months presentation - Gary Beier: Milwaukee Broadcast History.

Tri - County Swapfest March 16th, Ozaukee Radio Club Swapfest April 26th, Dayton is May 16th,17th, Green Bay Ham Fest May 31st.

Symposium – Feroz: February 24th 2026 @ WCTC. No swap-fest. No lunch. Coffee and water only. Up to 6 rooms are available. Looking at one main presentation, possible side discussions or training activities. Targeting newer hams. Ticket price ~ \$10. Feroz will contact WI Ham radio clubs. Looking for presenters, topic's and ideas of what our Ham community needs.

Presentation – Pierre Porter: Silent Signals: The Hidden Cyber Threats in Amateur Radio.

Porter is a Service Principal Product Cyber Compliance Manager, with an IT information systems security specialist background. Cyber security and personal information. The need to protect information systems, control systems, iot devices, internet connections. Our personal information is on our computers. Government, Banks, Education, Business databases, and Facebook plus others have our info. Be aware of phishing, spear phishing, smishing to try an trick you in giving information they need to compromise your passwords and accounts. How do we protect our self's. Use a separate computer and subnet for ham radio, Hotspots, Iot/ Pi devices on your network. Keep all computers OS, applications, anti-virus up to date. Use long passwords with letters, numbers, special character, plus use upper and lower case. Use a firewall, do backups and verify them. Use a VPN. Watch for software bugs.(Buffer, stack overflow, bad software.) Hackers backdoor into our systems. On air is like Facebook, anyone can hear what you say. Be careful what you say. Vacation plans, daily schedules, relatives info. Repeaters could be connected to the internet. Broadcastify. Ham software downloads - verify hash of downloads.

Meeting Adjourned at 8:53 pm. Respectfully Submitted Bill Dargis KD9BJZ Secretary WARAC, January 11, 2025

Contest Corner and DX Report Michael Falk, AA9RK

As I'm writing the column, the house is still shaking with the echoes of all the loud signals on 10 meters during the WPX contest. The bands were hoppin' for 48 hours of DX fun. I told you last month to get on the air and work some new countries. I did - 15 of them, I think!

The post-contest hangover from WPX casts a shadow over most of April. There are not many big events during this month, but there are a ton of smaller, niche events. For instance:

April 5th and 6th are a great weekend for state QSO parties: Louisiana, Mississippi, and Missouri all host their events, plus there will be Georgia and Florida State Parks On The Air events. There is a PODXS 070 event on the PSK31 mode on Saturday, April 5th. The SP DX Contest is also on the air, in case you didn't get your fill of working Europeans on the WPX.

feature the New Mexico, Georgia, and North Dakota QSO Parties, plus the JIDX CW Contest (focused on Japan), the IG-RY World Wide RTTY Contest (run by a German group), the DIG QSO Party – CW (also run by a German group), and the Africa FT4 DX Contest. There's also the ARRL's Rookie Roundup (the descendant of the old Novice Roundup), SSB edition.

The VHF+ Spring Sprints are starting, with a little bit different timing rule. There is a 7 hour period in which you can make contacts, but you have to choose a 4 hour window for your operations. This accommodates people who are making contacts across time zones. Surely I'll make more contacts with people in Eastern time than in Mountain, so I'll choose to start earlier. The 2 meter sprint is in the evening on Monday, April 14th; the 222 sprint is on Tuesday, April 22nd; the 432 sprint is on Wednesday, April 30th; and then the Microwave and 6 meter sprints take place on Saturdays in May.

Another VHF+ Spring Sprints change this year is that stations may be worked twice per band, once on digital and once on SSB or CW. This is, I'm sure, to counteract the concerns that the (relative) ease of making QSOs on digital modes is killing VHF+ analog contesting. (Just wait until the summer; CQ Worldwide has separated their VHF contest into completely separate analog and digital contests on different weekends!) It is indubitably easier to make weak-signal contacts on VHF+ using, say, FT8 or Q65, and I'm as guilty as anyone of ignoring the analog band segments when conditions are unfavorable. (And let's face it – good propagation has rarely come along during the VHF contests in recent years.)

On Easter weekend, April 18-20, you'll find the Michigan, Nebraska, Ontario, and Quebec QSO Parties, along with a Dutch digital contest and several QRP events. The following weekend, April 25-27, features a 10-10 (10 meter) digital contest, a British-Irish CW contest, and the Helvetia contest (all modes, but many more points for working Swiss stations).

Finally, the first weekend of May features many events, including the 10-10 CW contest and several larger state QSO Parties (7th call area, Indiana, Delaware, and New England).

Here are your AprilDXpeditions:

Maldives: Out in the Indian Ocean, 8Q7EF is on HF SSB and FT8 from April 3-10.

Cyprus: Cyprus, in the Mediterranean Sea, is a strangely divided island. There are Greek and Turkish communities on the island which have been having a territorial dispute for years, along with a British military

base. ZC4RH is on the air from the UK Sovereign Base Area on Cyprus from April 6-11, all modes on HF, plus EME on 2 meters/70 cm/23 cm.

Ogasawara: I didn't know where Ogasawara is either. I did some research so I could fill you in. Ogasawara is an archipelago of small islands, south of the main Japanese islands, east of Okinawa, and north of the Marianas. JD1BOI and JD1BON are on the air April 8-17, HF and 6 meters, all modes.

Fakarava: Don't worry, I've got you covered. Fakarava is an atoll in French Polynesia. What's it near? Well, nothing, really. A lot of salt water. It's a few hundred miles southwest of the Marquesas, if that helps. It's near Bora-Bora, too. Haru JA1XGI is activating this secluded, beautiful spot as TX7XG, 40 through 6 meters, all modes, from April 9-15. I don't know about you, but if I had a week in Fakarava, I don't think ham radio would be the first thing on my mind. I think I'd be diving, swimming, and sunning myself on the beach.

Palau: T88UW will be QRV April 16-23, mostly digital, some analog modes. Where's Palau? Much farther west than Fakarava. Think Philippines and you're in the right area.

St. Helena: It's as secluded as Fakarava, but much less tropical. That's why they sent Napoleon there. ZD7PG will be on the air from April 12-19, holiday style.

Galapagos: HD8G is active with 25 operators from April 18-26. 8 stations, 2 sites, and you can find more details at hd8g.com . HF, satellites, EME, 6 meters, they've got everything covered.

The Gambia: C5LT and C5R will be active in this West African nation, all modes plus satellites, from April 19-May 2.

Austral Islands: Where are the Austral islands? Actually, pretty close to Fakarava (a couple hundred miles south). This is another large DXpedition, 6 ops, big antennas, big amplifiers, and a focus on "human modes", as they say on their blog, with a little bit of digital thrown in. Their call sign is TX9A and they'll be QRV from April 25th to May 7th.

See you next month,

-Michael AA9RK



The Ozaukee Radio Club presents its 45th Annual Spring Indoor Amateur Radio, Electronics & Computer



SWAPFEST



Saturday, April 26, 2025

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/orcviv

Save the date for 2026: April 25, 2026!

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



Green Bay Hamfest

Saturday May 31, 2025 from 8 'til Noon

At the Our Saviour Lutheran Church 120 South Henry St.



Exit 183

E. Mason

On Green Bay's East Side, just off Main St. at the corner of Deckner Ave. and Henry St.

Entrance tickets \$5 per person

Great Commercial Vendors Featuring Tower Electronics

Your one stop shop for all the radio and antenna accessories that keep your shack on the air.

Wolf River Coils offering a variety of products for mobile, portable, and base station needs.

C3 Electronics providing Bandpass Filters for your favorite HF bands.

OTHER COMMERCIAL VENDORS INVITED

Huge parking lot for trunk sales/tailgating, <u>PLUS</u> plenty of space indoors with tables available for only \$10 a piece! (Parking lot and facility open for set up at 6:00 AM)

ailable for open for set up

TALK-IN: 147.120 PL 107.2

Deckner

Henry

E. Mason

Be part of the fun!

- ✓ Food available on site
- √ 50/50 Raffle
- ✓ "Bucket Drawings"
- ✓ Estate Sale Items
- ✓ Meet our ARRL Section Manager
- ✓ Great Door Prizes
- ✓ Commercial Vendors
- ✓ Lots of Vintage Electronics
- ✓ Grand Prize Drawing (Must be present to win.)
- ✓ Trunk Sales/Tailgating
- ✓ FCC License Testing (Registration 8:45; must be registered by 9:00. Testing promptly at 9:00. Contact ks9wi@mail.com prior to May 26 to register.)

Don't miss out!

For more information and to reserve a table or parking lot sales space, contact Todd Clausen, W9GRB, toddw9grb@gmail.com or 414-455-6374.



Sponsored by the Green Bay Mike & Key Club



New Convenient Location Off Interstate 41

Sunnyview Expo Center Parking Lot#2 500 E County Rd Y, Oshkosh, WI 54901 7:00 AM - 12:00 Noon

Come Buy or Sell



New Things

Winlink: Despite having repurposed my Winlink Node gear, I remain active on Winlink, mostly via the Wednesday Winlink net hosted by Bruce, K9WBT. Checking in is a matter of sending Bruce a Winlink Email every Wednesday. Takes just a few minutes and Bruce is quite the host. You should try it.

Checking in may be the activity, but we all know the important part is how you check in. Winlink is all about

options. Since my node went away, I've been using VARA HF and to make it exciting, I've been using QRP power. To switch things up, of late I've been back to VARA FM using the AC9DE-11 Node. For giggles, and keeping with my QRP obsession, I've found it works great with my HT on medium power using the AIOC as the computer interface modem. The "All In One Connector" is the real story here. I stumbled on it a couple years ago. It is very slick. My prior connector for the HT was the wonderful ,DigiRig which was pretty wire intensive. The AIOC uses a single wire USB-C connector to the computer and that's it.

CESSB: Hans Sommers at **QRPlabs** in just the past week has released a beta version of SSB firmware for his QMX kit QRP



radio. With the addition of SSB, the QMX became a multi-band CW, Digital and now SSB radio. CESSB (Controlled Envelope Single Side Band) is a digitally generated modulation technique which is well beyond the scope of me....but fortunately Hans is not so impaired and is very transparent with his tech. His software release and download site is HERE. This is a huge accomplishment which has been on his vaporware development scope for quite some time. CESSB has been around, as I understand it, for a while now (Flex since at least 2017). Of interest to the QRP user is that CESSB increases the average power by 3 dB over standard generated SSB. Take a stroll through the linked docs above for a better understanding.

IP400: I've been a subscriber to the wonderful weekly newsletter, Zero Retries by Steve Stroh, N8GNJ for the past 8 months or so. How he pumps out this level of information in a weekly format is beyond me, but I for one am glad that he does. This week he announced the first release of IP400 software. In a nutshell, IP400 is intended to leverage existing VHF/UHF analog repeaters into a meshed voice/data network. In a very poor analogy, think of it as a combination of ARDEN and AllStar whereby familiar VHF/UHF devices you can have a conversation with your friend while sending them photos or doc's at the same time. Or send text messages... OK, that is kind of the inspiration, though reality as wrapped into Ver 1.0 of the software is far less capable, but hey, it's a start!! Check it out, it is at least one vision of the future of our hobby.

How About that PWM? Tom Langer KD9FPC

Had an experience recently that changed the order of things. As a result, we'll look at stars mentioned for this month next month. Here's what happened. I was watching a video that included street traffic at night. Could not figure out what I was seeing. It appeared the headlights of all the cars were flickering. That's when I started wondering why and what was causing that flicker? The camera taking the film was a newer smartphone camera. I have discovered the cause, and yes it really does affect us hammers and each as a person.

PWM stands for Pulse Width Modulation. It's actually a science that has been with us for over 50 years now. Its right in front of your eyes as you read this newsletter on your screen. It is what allows for the amazingly bright colors, clarity and more on your smartphone, tablet, laptop and every other screen. I am going to let AI fill in the blanks;

What it is:

PWM is a method of encoding information or controlling power by varying the width (duration) of a series of pulses, while maintaining a constant frequency and amplitude.

How it works:

Instead of varying the voltage directly, PWM modulates the power delivered to a load by turning the voltage on and off rapidly. The "on" time (or pulse width) is varied to control the average voltage or power delivered to the load.

Key Concepts:

With that information our electrical engineers in the club already realize this is essentially the same process that allows for switching power supplies. The 120v AC wall power is converted to 13v DC. Some simply call them a form of transformer.

The following is from an article by Naomi Miller (Pac Northwest National Lab) provided by the DOE relative to PWM, which is the creator of light flicker;

If the light is changing in output up to 80 Hertz, which means it's going on and off—or from a high level to a low level—80 times a second, that is called "visible flicker." And then when we see the light oscillating in output from about 80 Hertz to 2000 Hertz, and it makes moving objects appear to be bright or dim as they move, that is called the "stroboscopic effect." There's a third effect called the "phantom array effect" or called "ghosting effect" that also occurs from 80 Hertz up to several thousand Hertz. The "phantom array effect" is due to your eye movement and it turns a flickering light source or the object it's lighting into a series of dots or lines or repeated images across your visual field, rather like rabbit tracks in the snow. You may have noticed this from some automobile tail lights when driving at night.

In my opening example, the headlights, the vehicle headlights were flickering.

With that in mind, let's talk about how that impacts us and our hobby. Using my summary approach, here goes;

One of the issues with PWM is that it is a huge generator of RFI.

While there was a form of photo PWM with incandescent bulbs, that created by LED's and other digital sources is digital PWM. In other words, an LED is either on or it's off, there is no middle ground like you have with incandescent. In other words, in order for LEDS to

work properly they have little PWM computers in line that are turning them on and off at high speeds. For lighting that's at least 60 Hz to 80 Hz.

A long time ago I mentioned that my SDR had a flicker just about every 60 Hz. Tried sourcing the cause forever. That's when I realized that, looking around the shack and near areas I had a LOT of PWM issues. The lighting all LED. The switching power supply. The furnace motor. A small electric heater. The computer and screen. Wrapped the SDR module in foil and had no change. My issue was both environmental and coming through the antenna, transceiver to the module. Then, in an aha moment I realized that my issue started just about the same time the city replaced our street lights with LED versions. One stands proudly right over our power line outside, just across from the transformer.

Bottom line is that all of the new technology meant to save us scads of money, drive aerodynamic vehicles with fancy lighting (inside and out), operate brushless motors and power supplies, lighting inside and out of our homes is creating a level of RFI not realized before. By the way, the reason that I saw the headlights flickering is that the headlights were operating at one level of PWM while the cellphone camera was at another and could distinguish the flicker. Try it with your smartphone some time just as a test.

Wrapping up this portion of PWM, if you are trying to work with noise on your radio, you can no longer assume the obvious. Chances are there are many new sources of RFI in and around your shack. Enjoy the hunt.

Back at the beginning I mentioned about PWM impacting you as a person. This following little bit may be of help to you, your family and friends.

There are scientists in a field known as psych neurology. It's a study of the brain as it relates to outside stimuli. While seeing those flickering headlights I wondered what that may do to someone who was sensitive to the light. At a high enough hertz we see solid light. Our mind sees the flickers. If you are older like yours truly you will remember the big movie theater scandal. That's when they were caught using pulse images during the beginning of the movie using images meant to make you hungry for popcorn, soda, etc.. And, it did work. It greatly increased refreshment stand sales.

So, as part of the research on PWM I dug into the health issues that may be involved. Boy did that ever open up a new rat hole to follow. The simple answer is YES, PWM does impact health.

For those of us who didn't realize it, too much exposure to PWM may very well cause;

Mood changes

Eye strain

Concentration issues

Dizziness

Sleep disturbances, especially kids

Blurry eyes

Headaches

Nausea

More

This also includes exposure to computer screens, LED lighting, automotive lighting, cellphones, televisions and more.

Iowa State University – Research, 2021 called out cellphones in particular and came up with the term "Cybersickness" to describe the impact on people who spend too much time with cellphone screens alone. Take a look at people, especially younger folks at the mall next time. They spend all day looking at those phones. Could explain a lot.

But the issues go deeper. Seems that PWM in lighting may trigger serious reactions in those who are sensitive. The estimates are that 10%, or about 33 million people, in the U.S. have brains sensitive to PWM lighting. They will especially deal with the symptoms just discussed

Then there are the critical problems it may create. According to an article in Psychology Today by Dr. Marilyn Wedge based on a study done in 2021 and reported in Frontiers in Psychology they found that;

Screen time of children in the Autism spectrum was much greater than that of children without. That screen time was positively correlated with Autism symptoms.

This illustration by Ray Shaw on Cybershack (2024) spells out the issues of PWM related to cellphones;

Some of the symptoms shown in the illustration were mentioned above. Very serious issues just now being looked at by science. One thought, combine a day of cellphones, staring at computer screens all day in school and coming home for more computer and T.V. time may well help to explain a good number of mental health issues in today's younger kids.

I'll leave you with this. Here are a list of things you can do to reduce the impact of PWM in vour life;

Limit screen time

Purchase things with higher frequencies of PWM that are starting to come to market.

Lower the brightness of screens

Consider LCD screens

Take a lot of breaks away from the screen

Turn off all screens in the room where you sleep

So, how about that PWM? It is a very amazing thing really. Technology is pushing our world

far away from the analog we knew to the digital. It makes things smaller, brighter more designed and cheaper. But, for ham radio and our brains, it may not be better.

Heavy subject today. So we'll end with a little (very little) humor: "How do you start a war at a hamfest? Have one person say 'I like Baofeng' and [a few minutes later] another say 'I like FT8.'"

Wishing you a blessed, peaceful and joyous Easter and Passover.



Editorial

Tom KD9FPC's article brought back memories of my lighting experiments on the first car I bought. Like all cars sold at the time it had sealed beam head lights. Not bad compared to the old lights (gas, candle etc.) But as speed increased they really didn't show you much!

Me being me I was reading car magazines and came across European replacement headlights with special reflectors and Halogen bulbs which gave a better light pattern and more light. They were a big improvement. Especially while driving on Connecticut's back roads which I drove going back and forth to work. After a while I added some good driving lights, which proved to be a good combination.

All of this was probably less then legal. Got away with it.

A little off from ham radio but having done mobile QSO Party's we can connect it HI HI If you have further interest try this to start https://cartreatments.com/types-of-headlights/

73 Frank KA9FZR



March 1940

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

DON'T KEY LIKE A PHONE MAN



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 President: 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