



Official Publication of the
West Allis Radio Amateur Club

Hamtrix

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MARCH CLUB HAPPENINGS



NUT NET

3.985mhz

Monday-Saturday

8:15am CT

Milwaukee-Florida Net

Every Day on 14.290 Mhz

7:00AM - 9:15AM ET

6:00AM - 8:15AM CT



Club Meeting

St. Peter's Episcopal Church,

7929 W. Lincoln Avenue, West Allis

March 14, 2017

Post Wisconsin QSO Party discussion

Replacement election for Dave Garnier's board member position

Discussion and vote on Club trailer

[Join us for a pre-meeting dinner](#)

[at Johnny V's Classic Café](#)

[1650 S 84th St at 5:00pm](#)

2017 Dues will be collected at the meeting.

WARAC 2-meter net

Every Wednesday at 8pm

SEWFARS K9ABC Repeater 146.820 standard (-)offset

127.3 Hz CTCSS

if repeater down try 146.55 simplex

Wisconsin QSO Party March 12, 2017

1:00PM CDT to 8:00PM CDT

[Click here to go to web page](#)

Club jackets and hats!

Go to club Web site and click on
The GOLD MEDAL IDEAS block

[For more info or click here](#)



The President's Shack March 2017

Just a few days until our Wisconsin QSO Party - Sunday, March 12! The QSO party is one of our club's major activities and it's visible to the entire world. It's truly an honor and a privilege that our club has been able to sponsor this contest for over 30 years.

Everything you need to know about the 2017 edition of our Party is on our website at <http://www.warac.org/wqp/wqp.htm>. Included on the website are postings of route information from mobiles that will be operating in the contest. And I want to express my gratitude in advance to all those who participate, especially the dedicated mobile operators and drivers that donate their time, energy and gasoline. You all help to make WIQP the success that it is.

Again, you don't need to be a contester to feel at home in our QSO party. It doesn't need to be a competition - just get on the air and make some contacts. A lot of people will be looking for Wisconsin stations, so it will be easy to find someone to connect with. If you have station problems, computer issues or anything else you need help with to get on the air, please call on me or other club members to give you a hand.

At our upcoming club meeting, there will be plenty of discussion about WIQP, so please be there to share your thoughts and experiences.

We have two items of business for this meeting. First, Dave Garnier, WB9OWN, has decided to resign from the Board. At the meeting we will accept nominations and elect a replacement Board member. Thanks, Dave, for your contributions to the Board over the last year and a half.

Second, at the last meeting, Steve, NO9B, talked about a proposal for our club to purchase a trailer

to be used for storage of Field Day gear and also donated equipment items awaiting sale for our scholarship fund. Look elsewhere in this Hamtrix for the complete proposal. For large expenditures, our constitution requires publication of a written proposal in the club newsletter prior to the meeting at which the membership vote is taken. So read the proposal and bring your comments for the final discussion and vote at the upcoming meeting.

A WARAC member from back in the 1970's, Pat Keogh, WB9GKZ, has uploaded video to YouTube of our club's first Swapfest in 1973 and also of our Field Day of that year. Thanks, Pat! It's certainly interesting to see the people (many now SK's) and how we did things back then. And I sure wish there was some way to improve the quality of these old movies.

Swapfest:

<https://www.youtube.com/watch?v=BCWimO83ShQ&feature=youtu.be>

Field Day:

<https://www.youtube.com/watch?v=GLc15V8RyJs&feature=youtu.be>

See you at the meeting!

- Tom, K9BTQ

From the Editor

Almost time for the Wisconsin QSO party. This year Mike Johnson WO9B, Bill Reed N9KPH and me will try the rover life style. Mike tried it last year and had fun with it. So Bill and me decided to join him in the fun.

Amazingly, at least for me, was all the planning that can go into something like this. Of course with something like this you only know if too much or too little planning was done after the event. Actually I think that is part of the fun of something like this the (unknown)!

Writing that last paragraph stirred up some old brain cells. I remember a short story that went something like this: An old Ham became a silent key and found himself in a beautiful place with the best ham station he had ever seen. If a signal was heard he could tune it in to 599 clarity. If he called he got an

Go to Editor pg 13

WARAC General Meeting Minutes

February 14, 2017

Introduction

The meeting was called to order at 19:05 by President, Tom Macon (K9BTQ). Overall meeting attendance was 17 members, plus 00 visitors.

Tonight's Program:

- WI QSO Party rules changes & review: Mike Johnson (WO9B)
- National Parks on the Air (NPOTA 2016) review: Mike Johnson (WO9B)
- WI QSO Party discussion, Mike Johnson (WO9B), Tom Macon (K9BTQ)

Future Programs:

- March, 2017: Open
- April, 2017: Open

Announcements

Business

- Motion was made and accepted to approve the January general meeting minutes as published in Hamtrix.
- Purchase of a trailer to store and transport club equipment for events such as ARRL Field Day or swapfests.

The meeting was adjourned at 21:16.

Respectfully submitted,
Erwin von der Ehe (WI9EV)
Secretary, W.A.R.A.C.
2017-02-14

W.A.R.A.C. Board Meeting

February 28, 2017

Howard Smith (WA9AXQ) called the meeting to order at 19:05.

Present: Tom Macon (K9BTQ), Howard Smith (WA9AXQ), Erwin von der Ehe (WI9EV), Steve Dryja (NO9B), Frank Humpal (KA9FZR), Mike Johnson (WO9B). Special guest Phil Gural (W9NAW) was present to help with the Swapfest wrap-up presentation.

Howard Smith (WA9AXQ) presented the monthly Treasurer's report.

Dave Garnier (WB9OWN) resigned his board position. A replacement is planned to be elected the next General meeting. The board approved a resolution thanking Dave for his service and wishing him well.

Erwin von der Ehe (WI9EV), Phil Gural (W9NAW), and Steve Dryja (NO9B) presented a wrap-up of the 2017 Swapfest.

Club trailer purchase proposal will be generated by Steve for Board review and presentation to the Club membership for discussion and approval.

Club operation manual was discussed. Tom updated the status document.

Programs

February, 2017: NPOTA wrap-up, WIQP

March, 2017: WIQP wrap-up

April, 2017: ARRL topics?

Future Program Ideas

Logger 32 logging software

SO2R Contest operating

WE Energies or Time-Warner Cable noise tracking

FM38 Repeater System

Youtube downloads

ARES

Solar weather

VHF/UHF Digital Communications

Ham trivia night

Story night

Other Items

Meeting was adjourned at 21:30.

Respectfully submitted,

Erwin von der Ehe (WI9EV)

Secretary, W.A.R.A.C.

2017-02-28

Anderson Powerpole®

Connectors

Frank KA9FZR

The other day Mike Johnson WO9B and I were emailing about about our QSO party rover trip. He mentioned he needed a cigarette lighter plug for his 2 meter radio's Anderson Powerpole plug. I had one set up already so we were in business. That got me thinking how easy our rover trip and actually our National Parks on the Air trips had been thanks to the standard powerpole system.



The other thing we need to keep in mind is the fact that much of the equipment we have been using has been standardized at 12 volt battery voltage. Using these two things makes conversations about mixing and matching equipment down to who is going to bring what. Worrying about what type of equipment and how we will power it almost a no brainer.

Given that. I decided to do some web searching and see what I could find about Anderson and their Powerpole plugs.

In no special order here are somethings I have found.

Here is what Anderson says about their product.

Powerpole® is a registered trademark of Anderson Power Products

Powerpole® Connector Features & Benefits

Genderless Housings: Provide simplified assembly and minimize the number of components

Stackable Modular Housings: Available in four sizes to right size your connection need

Connection Versatility: Contacts for wire, PCB, or busbar all fit into the same housings

Low Resistance Connection: Silver or tin plated contacts inside housings that strongly force the contacts together

Color Coded Housings: Help ensure that connectors are assembled and mated correctly

Self Securing Design: Stainless steel springs create a robust force between the contacts that holds the connector in the mated condition, but allows it to be quickly disconnected.

Nice cutaway of a power plug. The basic plug that we use is rated at 600 volts up to 50 amps. There are three different size contacts that are designed for different gauge of wires. 20-16 16-12 and 14-10 gauge the wire size determines the real current carrying capacity 15, 30 and 45 amps respectably

Cutaway view of a Powerpole connector.

Note that the contact must fit through the gap between the housing and the spring and that the contact is snapped over the end of the spring.



For a good installation guide and were I got some of this info. This site is good.

http://www.westmountainradio.com/kb_view_topic.php?id=ST166

Info taken from a Wikipedia article on Anderson Powerpoles.

Amateur radio

The Powerpole connector has been adopted by some segments of the Amateur Radio (Ham Radio) community as their standard 12-volt DC power connector for everything from radios to accessories.[12] Two notable groups are Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES).[11] It is more expensive than the older de facto standards of the two-wire trailer plug and the Molex connector, but provides a more reliable electrical connection (both mechanically and electrically), and is easier to adapt to a wider range of wire gauges.[19]

Amateur radio equipment is based on 12-volt DC automotive voltage, which is also called 13.8-volt DC. A lead–acid battery with six-cells used as an automotive battery voltage will vary depending on various electrical loads in a vehicle. Without loads the battery will float at 11.7–12.8 volts, and while charging from an alternator the voltage will increase to 13.8–14.4 volts DC.

For use in amateur radio, the community has adopted a standard polarity for assembling pairs of Powerpole connectors. The standard is red positive and black negative. When viewed from the contact side, a mnemonic for remembering the arrangement for the positive connector is: "red right — tongue top".

Model railways

In model railways, the NTRAK Modular Railroading Society adopted the PowerPole PP30 as a recommend practice in 2005. and as a standard in 2011. The use of the older Cinch-Jones connector has been deprecated, but is still permitted on legacy modules. However, the owner of a module with Cinch-Jones plugs is now required to provide adapter cables to the newer standard.[13] North Raleigh Model Railroad Club (NRMRC) also uses Anderson Powerpole connectors.[14] Free-mo modular standard adopted Powerpole as the new connector standard as of 1 July 2015, with a one-year transition period to convert existing Jones connectors.[20]

VOACAP Propagation Model

Mike Johnson, WO9B

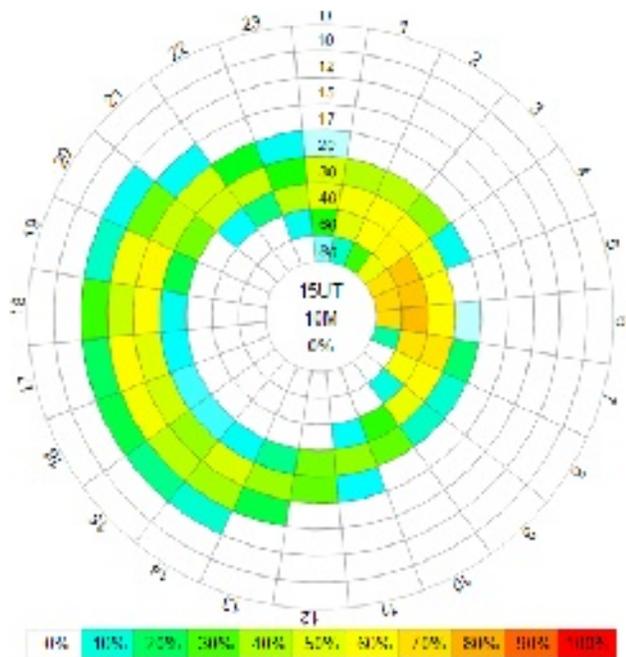
HF ain't what it used to be. By all appearances, that is a phrase we should be getting used to. Funny but the solar cycle minimums always brings out my interest in learning all I can about solar weather and



propagation forecasting. Wonder why? Despite the ebbing tide of the solar cycle, there are certainly openings and equally certainly corresponding activity. There is also the tried and true technique of more power and better antenna systems. The truth of the later always comes to mind when I can work F5IN on a day when it is hard to work NY much less France. But you know being unwilling to put a lot into antennas, radios and amplifiers hasn't really stopped me. You just need to work a little smarter and not expect to bag the stations at will. Working the bands on low or QRP power levels is certainly not for everyone,

but it is challenging. So a plug along with my 5 to 50 watts and a dipole.

Changing to the Flex 1500 with PowerSDR has been a big help. Granted the learning curve on the radio has really been a bear, but of late the gremlins have worked themselves out of the day to day operations and it has been very much what I expected. The PowerSDR software is being continuously upgraded due to the effort of KE9NS. He has issued a string of upgrades in the past couple of months offering some nice new toys to play with. Of the myriad of changes, I'm going to focus in on the propagation forecasting model, VOACAP, that he has built into the latest version, 2.8.0.16.

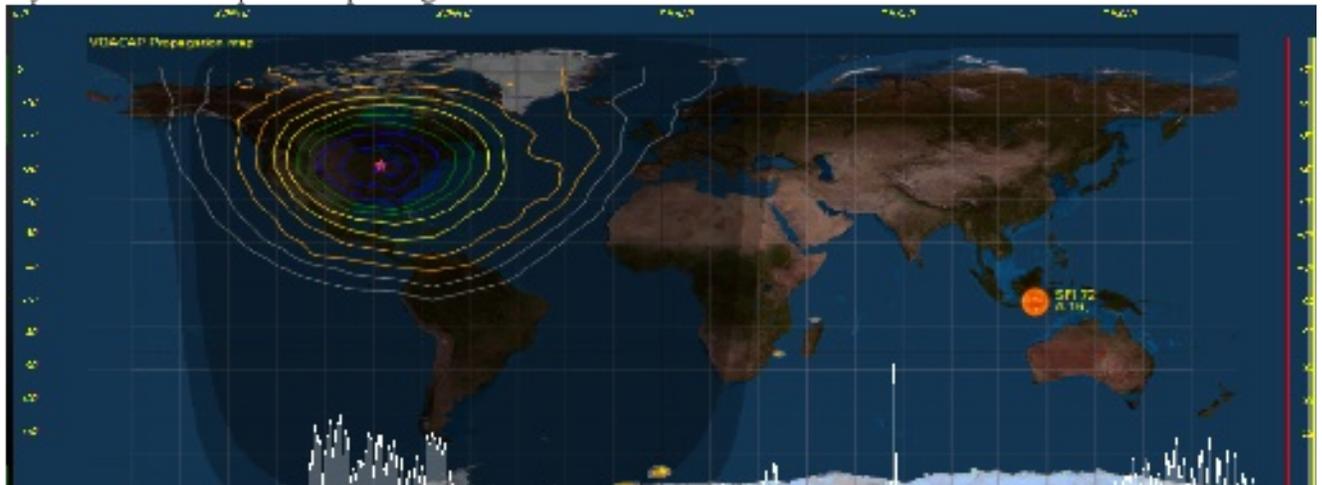


What is VOACAP? The name stands for Voice of America Coverage Analysis Program. This method has been around for a long time and is very complex. Far more complicated than what I can delve into in this short article. It uses real time solar and atmospheric data along with your station particulars (power, antenna) as well as the receiving stations particulars to generate point to point propagation models. Back in the day, this was a difficult equation to calculate, but alas with the internet, it is all online at www.voacap.com. Here is the prediction for working Europe. So on 20 meters, the model says 1300 UTC to 2400 UTC. That certainly jives with my expectations. What's even better, on a probability basis, is 80 meters 0400 UTC to 0600 UTC. Geez, that should catch the greyline in Europe. Pretty neat. But for my needs, I am really looking for a more general type of prediction, one that lets me know in real time where I can expect to

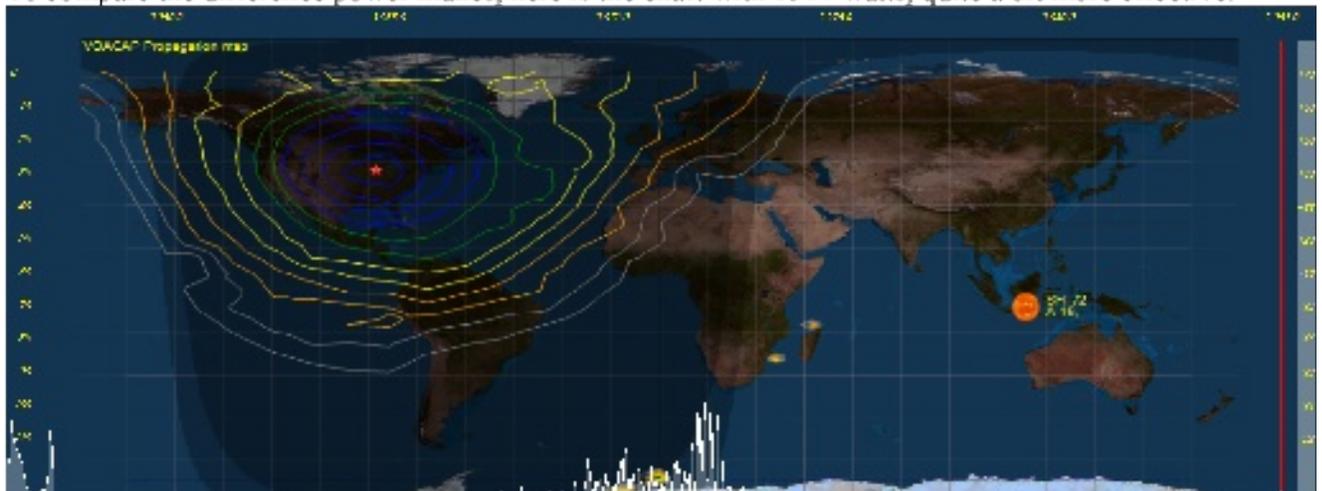
be heard. This is where the PowerSDR software really shines.

What KE9NS has done is to include the VOACAP prediction software into the Spotting DX Cluster setup window that is included with the program. By activating the feature, the backdrop to the panadaptor plots a world map with greyline, solar location, solar weather and the current VOACAP propagation. This is setup to reflect either a dipole or a beam antenna as well as your power level.

So looking at it, and as a comparison to the information above (BTW is is 0400 UTC at the time I'm writing this article) 80 meters should be starting to open into Europe....and that is exactly what it shows for my little 50 watt dipole setup using CW:



To compare the difference power makes, here is the chart with 1500 watts, quite a bit more effective:



And just to prove the point that the bands aren't what they used to be, here is 20 meter CW, not a lot going on.:



NOTIFICATION OF PROPOSED TRAILER PURCHASE

To The Members of WARAC:

I, Steve Dryja, VP of WARAC, in accordance with the WARAC By-Laws recommend the club purchase a trailer to house field day equipment and donated equipment, the cost of the trailer is \$2900.

The reasoning is as follows:

- Currently field day equipment is stored at John Zach's house. John Zach's garage, which stores the bulk of the Field Day equipment, will not be available in the near future and this substantial equipment will need to be stored somewhere.
- Currently donated equipment for the Education Scholarship Fund is being stored at Steve Dryja's house. Due to the nature of donations, the amount of equipment can be substantial. Also, the sales of this equipment is typically via swapfests, which require it be loaded up, transported and then what is not sold, returned.
- The trailer we are proposing will be of sufficient size to accommodate all the field day equipment and the donation gear in a single, ordered, transportable situation.
- The trailer can be moved conveniently and with short notice vs. the current system of meeting, gathering, packing, transporting, ect situation that we currently have.
- By having all of our equipment in one place it will be much easier to organize, move, take to swap fests and to field day.
- Being blunt, if I died, not everyone would know what is and what is not WARAC's in my garage. By having a trailer, everyone would know the trailer and its contents are WARAC's.
- If the club decides to sell the trailer, the resale price is good, 7 X 12 trailers are within 60-80% of new depending on condition.
- Our current storage situation, thanks to John and Steve, has been free to the club. Moving ahead, with the anticipated loss of John's garage, the no cost storage option will be gone. Current storage locations are in the range of \$100 to \$200 per month and we still have to haul the field day and donated equipment. Based on an annual storage expense of +/- \$1500, the proposed trailer will pay for itself in 2 years.

Q&A:

Q: Who will be responsible for the trailer?

A: VP of WARAC per the By Laws.

Q: Who is responsible for the insurance and what does it cover?

A: WARAC will have to get insurance on the trailer, insurance covers the trailer and its contents.

Q: Who will move the trailer when needed?

A: First will be the VP of WARAC, second will be any board member of WARAC and third will be any member of WARAC, last will be whomever the board designates.

Q: How will the trailer be secured?

A: The trailer doors and hitch will be secured with combination locks specific to the need with the combination stored with the WARAC board members.

Q: How do we make sure we recoup the costs of the equipment in the trailer if something happens to it?

A: The VP of WARAC is responsible through our By Laws to keep a record of donated and purchased equipment which will be submitted to the insurance company.



Trailer Details:

SIZE	COST	INT. HT.	SIDE DOOR
7 X 12 Single Axle	\$2900.00	6' 0"	32" DOOR

STANDARD FEATURES

- 3500 LB SPRING AXLE(S)
- 15" RADIAL TIRES ST205/75R15
- 24" OC WALL POSTS
- 24" OC TUBE STEEL ROOF BOWS
- 24" OC FLOOR CROSSMEMBERS
- PAINTED BLACK TONGUE AND REAR SILL
- 2" COUPLER WITH A-FRAME
- 3/8" DRYMAX WALL LINER
- 3/4" DRYMAX FLOOR

- 1 1/2" FLAT TRIM TOP AND BOTTOM
- 24" FLAT TOP WEDGE ON 5 & 6 WIDES
- 30" FLAT TOP WEDGE ON 7 WIDES
- 36" FLAT TOP WEDGE ON 8.5X WIDES
- 16" TALL ATP STONE GUARD
- LED STRIP TAIL LIGHTS STOP/TURN
- LED CLEARANCE LIGHTS
- ATP FENDERS
- 12V DOME LIGHT WITH SWITCH
- PAINTED EXTERIOR SCREWS - WHITE
- RAMP DOOR OR DOUBLE REAR DOORS - YOUR CHOICE
- SIDE DOOR GRAB HANDLE
- 6" BARRIER TAPE
- LIMITED 3 YEAR WARRANTY
- WHITE

OPTIONS:

- | | |
|---|----------|
| ● RAMP DOOR OR DOUBLE REAR DOORS | 0.00 |
| ● 5' WIDE - SINGLE REAR DOOR OR RAMP | 0.00 |
| ● D-RINGS RECESSED IN FLOOR 5,000 LB | 20.00 EA |
| ● REAR STABILIZER JACKS - PAIR | 75.00 |
| ● ROOF VENT | 50.00 |
| ● 16" ON CENTER WALLS 5', 6', AND 7' WIDES | 100.00 |
| ● 6" ADDITIONAL INTERIOR HEIGHT | 15.00/LF |
| ● 12" ADDITIONAL INTERIOR HEIGHT | 20.00/LF |
| ● 030 EXTERIOR ALUM UPGRADE - ANY COLOR | 15.00/LF |
| ● 1 PIECE ALUMINUM ROOF - ANY SIZE | 100.00 |
| ● FLUSHLOCK WITH BAR LOCK ON SIDE DOOR | 75.00 |
| ● UPGRADE SA TO BRAKE AXLE | 175.00 |
| ● WHITE VINYL IPO DRYMAX WALLS | 75.00 |
| ● 3,500 LB TA TO (2) 5,200 LB SPRING AXLES | 500.00 |
| ● 3,500 LB TA TO (2) 5,200 LB TORSION AXLES | 800.00 |



Two sites looking at improving signals received and sent.

https://www.ecnmag.com/news/2017/03/engineers-devise-two-way-radio-single-chip?et_cid=5864744&et_rid=353748193&type=headline&et_cid=5864744&et_rid=353748193&linkid=Engineers+Devise+Two-Way+Radio+On+a+Single+Chip

<https://www.ecnmag.com/news/2016/03/engineers-design-next-generation-non-reciprocal-antenna?cmpid=horizontalcontent>

Editor

answer. It was wonderful. He operated for an unknown period of time, with no equipment troubles. He would turn it on and it worked. Hook up an antenna, signals were there waiting. He started to not enjoy operating as much. As it went on he even enjoyed it less. One day he asked one of the passing angels why he was enjoying it so little since he was in heaven. The angel looked at him and asked “what made you think you were in heaven.”

That story has stuck with me a long time. Seems to come back when I’m in a middle of a hard problem that doesn’t seem to have an answer.

Hopefully everyone has a fun safe QSO party that give you lots of stories. If you care to write them up I would be happy to receive them and try to get them into Hamtrix for all to hear.

73

Frank KA9FZR

Officers and Board

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Tom Macon, K9BTQ

Vice President

Steve Dryja, NO9B

Secretary

Erwin von der Ehe, WI9EV

Treasurer

Howard Smith WA9AXO

Directors

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W9FK
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***See our Web Page or contact us
for more information on***

- WARAC Memorial Scholarships
- Wisconsin QSO Party
- Midwinter Swapfest
- Worked all Wisconsin Counties Award
- Amateur Radio Classes

WARAC holds meetings on the second Tuesday of each month and board meetings on the fourth Tuesday of each month. Meetings are held at 7:00 PM at:

**St Peter's Episcopal Church
7929 W. Lincoln Avenue
West Allis, WI**

Entry is off the alley at the rear of the church.
A wheel chair ramp and chair-lift are available.