



Official Publication of the
West Allis Radio Amateur Club

Hamtrix

[click here to go to web site](#)

Volume 64, Issue 4 April, 2017

APRIL CLUB HAPPENINGS

Club Meeting

St. Peter's Episcopal Church,
7929 W. Lincoln Avenue, West Allis
April 11, 2017

Multi-band end-fed portable QRP antenna
Mike Johnson WO9B and Dave Garnier WB9OWN

Story time: See President's Shack pg 2

[Join us for a pre-meeting dinner
at Johnny V's Classic Café
1650 S 84th St at 5:00pm](#)



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

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



Field Day Planning Meeting--Save the Date!

St. Mary's Parish, Hales Corners
Tuesday April 18, 7 pm
9520 W. Forest Home Ave
[See page 5 for details](#)

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 April 2017

buy other people's treasures. Plan to come early (6:30PM) and come hungry. More info at the upcoming meeting and next month's Hamtrix.

Believe it or not, Field Day isn't that far away - a little over two months (June 24, 25). So come to the Field Day planning meeting on April 18 and participate in the planning. See Chairman Chuck's article elsewhere in this issue for more information.

At the June meeting we will be visited by ARRL Central Division Director Kermit Carlson, W9XA, who will give a report on the current issues facing amateur radio and the League. And, of course, this is the annual pre-Field Day meeting, so Chairman Chuck, W9WLX, will lead a discussion of our plans for that event.

Last meeting we voted to purchase a storage trailer for our Field Day gear and our donated equipment inventory. I'm happy to report that the purchase has been completed and that the new trailer is at Steve's QTH. The next step is to outfit the interior of the trailer to efficiently store the FD gear. Volunteers are welcome! More info at the upcoming meeting.

By the way, the Michigan QSO Party looms! It's Saturday, April 15 and it runs for 12 hours, from 11:00AM to 11:00PM CDST. We're close to most of Michigan, so you'll hear lots of activity. Visit <http://www.miqp.org/> for details.

And, as always, don't forget our before-meeting dinner at Johnny V's Classic Café, 1650 S. 84th St. at 5:00PM.

See you at the meeting! Bring a friend!
- Tom, K9BTQ

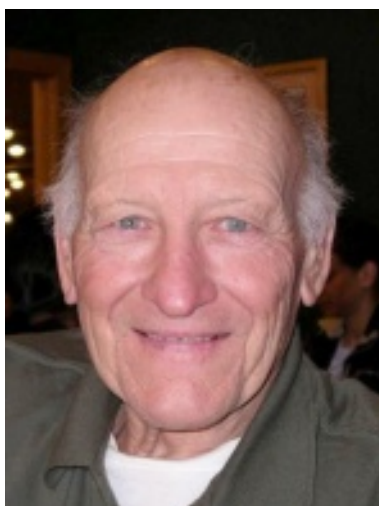
From the Editor

If the nut net is any indication propagation is changing! Some days my 5 watts is heard by almost everyone. Others days even the guys running amps aren't getting through. It's part of the fun of being a ham radio operator.

Not much is going on around here. I've been busy with another hobby so I haven't made a meeting or two. The weather is giving hints of changing to spring. I still haven't come to believe that it is

Go to Editor pg 9

As I'm sure everyone is now aware, John Zach, K9IAC, passed away on March 23. John was a member of our club for over 60 years and was actively involved in various club activities over most of that time. Since the inception of our scholarship program



in the 1980's, John spearheaded the sales of donated equipment that generated much of the necessary revenue. We will certainly miss him.

Dave Garnier, WB9OWN, has received good news on his medical status and has decided to stay on as a member of our Board of Directors. I'm glad to hear the good medical news and I'm glad Dave is able to remain on our Board. Welcome back, Dave!

This month's program will be in two parts. First will be a presentation on a multi-band, end-fed portable QRP antenna by Mike Johnson, WO9B and Dave Garnier, WB9OWN. Also, we want to do some story-telling. Everyone has stories to tell and we'd like to try storytelling to add some variety to our meeting mix. More about this at the meeting and, if you have a story you would like to tell, please let me or another Board member know.

Coming up in May is our annual Pizza/Auction. As in the recent past, we'll start with a pizza feast and follow it up with an auction. Plan to bring your treasures to sell and save up your money to

WARAC General Meeting Minutes

March 14, 2017

Introduction

The meeting was called to order at 19:04 by President, Tom Macon (K9BTQ). Overall meeting attendance was 17 members, plus 00 visitors.

Tonight's Program:

- WI QSO Party discussion, Mike Johnson (WO9B), Tom Macon (K9BTQ). Propagation was "unusual", and may result in reduced quantity of QSOs compared to previous years.
- Microprocessor project by Jim Casamassa (WB9IXS) – overview of an air compressor controller

Business

- Motion was made and accepted to approve the February general meeting minutes as published in Hamtrix.
- Due to Dave Garnier (WB9OWN)'s resignation, a club Director must be elected. No nominees were named; therefore, the matter will be raised at the next general meeting.
- Steve Dryja (NO9B) conducted a discussion of the proposal to purchase a trailer to store and transport club equipment for events such as ARRL Field Day or swapfests, as presented in March, 2017 Hamtrix. A motion was made and seconded to accept the proposal as presented, and authorize purchase. An amendment to the motion was presented, seconded, and approved to make the purchase contingent upon the Club Treasurer being able to obtain trailer property insurance for the price of \$200 maximum per year. The amended motion was voted on and approved.
- A discussion regarding income from equipment donations revealed that as a significant step toward increasing our scholarship endowment in order to increase our scholarship amount.
- A claim for the "Worked All Wisconsin Counties" award was received. Contacts to be verified.
- Wednesday night W.A.R.A.C. Net is working well.

The meeting was adjourned at 20:48.

Respectfully submitted,
Erwin von der Ehe (WI9EV)
Secretary, W.A.R.A.C.
2017-03-14

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

March 28, 2017

Howard Smith (WA9AXQ) called the meeting to order at 18:55.

Present: Tom Macon (K9BTQ), Howard Smith (WA9AXQ), Erwin von der Ehe (WI9EV), Steve Dryja (NO9B), Mike Johnson (WO9B), Dave Garnier (WB9OWN).

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

Dave Garnier (WB9OWN) has had a change of circumstances and is willing to resume his board position. Motion was made and unanimously approved to rescind the board's previous acceptance of Dave's resignation.

Lack of a contract for the Waukesha County Arena is a concern. A date commitment and a contract are being pursued.

Club trailer insurance needs to be finalized – particularly, determining which material should be insured and how much to value it.

Club trailer can be picked up the weekend of April 1st.

Sunshine committee needs to be formalized.

Club operation manual was discussed. Tom updated the ftp site.

Programs

April, 2017: ARRL topics?
May, 2017: Pizza night & auction
June, 2017: Field Day Plans

Other Items

2 Meter FM Net Wednesdays at 20:00.

Meeting was adjourned at 20:50.

Respectfully submitted,
Erwin von der Ehe (WI9EV)
Secretary, W.A.R.A.C.
2017-03-28

Future Program Ideas

Logger 32 logging software
SO2R Contest operating?
WE Energies or Time-Warner Cable
noise tracking
Feedlines
Solar weather
VHF/UHF Digital Communications
Ham trivia night
Story night

Field Day Planning Meeting--Save the Date!

2017 Field Day planning meeting is scheduled for Tuesday, April 18. At this time, last year's New Berlin Field Day site is our first choice, but remains tentative pending a permit from the City of New Berlin. The location of the planning meeting is:



St. Mary's Parish, Hales Corners
Tuesday April 18, 7 pm
9520 W. Forest Home Ave

We will meet in the "Parish Office Lunch Room". Everyone should enter through the doors between the two buildings, go a little to the left and enter the parish office. Once there, tell the greeter that you are attending a meeting in the lunch room. You should be told to proceed to the back area.

Hope to see you there and get your thoughts on Field Day 2017!

Being a rover for the Wisconsin QSO party by Frank Humpal KA9FZR

Last year Mike Johnson WO9B decided to be a rover for the 2016 Wisconsin QSO party. We heard about in on the WARC 2 meter net and while we were out doing NPOTA air activations.

So when he decided that he was going to do it again I asked if he wanted company this year. Bill Reed N9KPH who was also with us for the NPOTA activations, also signed up to come a long.

Through the fall we discussed antenna options, equipment options, etc. We were able to test individual components and finally the whole set up. We each had equipment to contribute to the project so it became a real team effort. Mike (with help from Paul WB9HCO) came up with the antenna set up the logging computer and the CW equipment. Bill provided his Yaesu FT-857 and batteries to operate it. I provided the tuner and mounting board to keep the radio and tuner in place.

Finally the big day came. We left Milwaukee around 9am for Door county, our first of 6 stops to operate from.. After a good lunch at the Grapevine Cafe we got to our first stop on time. Although the site looked fine on Google it did prove to add a little challenge. We ended up in a driveway next to a burned out building that was being demolished. We put the antenna up parallel to the road and were off.

Our plan was to let Mike our master CW operator get our required 12 contacts on CW. Then we'd get SSB contacts using Bill and me as operators. With separate batteries we were able to operate with the car turned off. Thus we had no problem with the car electronics giving us any interference. Since we set a time schedule when the time came we packed up and took off for the next site.

All of the sites worked out fine. Only one, a church parking lot, had a high noise level. The rest were rf quiet. What surprised me was how little attention we attracted while doing it. I think the only interaction was with a couple employees of a cement factory whose lot we set up in. They just wondered what we were doing.

The last site was a dirt construction site that. We were glad it was dry and maybe frozen. We packed up after that and had a well deserved meal and beverage. The ride home was in a snow storm. Which helped us keep our speed down.

Some thoughts on the project.

- 1: It was fun which was one of our goals.
- 2: We could have used a little more familiarity with each others equipment. We did take more time than needed finding out how to operate each others equipment. Not a big problem but did cut some time off of operating.
- 3: It is surprising how much energy something like that uses. Between being out in the cold in out of the car etc, you really use up energy.
- 4: We did find out Mikes van did not add to any rf interference when we decided we needed more heat than our outdoor cloths were suppling as the sun went down.

Would I do it again yes it was fun from the planning to seeing how it really worked in the field.

RoverLocation	CW 3.5	CW 7	CW 14	LSB 3.5	LSB 7	LSB 144	Tot	Accum
BRO	15	23	9			3	50	50
CAL				14			14	64
DOO		12			1		13	77
KEW		26			4	2	32	109
MAN				2	31		33	142
OUT	15			2			17	159
Total	30	61	9	18	36	5	159	159



Mike WO9B operating the QSO party



Top and bottom of the center pole of our antenna

Phil Gural W9NAW in his nice temporary shack at Green Lake.



NASA is Developing High-Speed Space Communication

BY Jennifer DelaOsa

NASA is currently working on a pathfinder relay satellite known as the Laser Communications Relay Demonstration (LCRD), which may be the first steps towards high-speed Internet in space.

The LCRD will help coordinate systems using laser communication (also known as optical communication), which in turn will enable faster data transfer between Earth-based technology and spacecraft. If all goes as planned, this system could greatly advance space communications.

“LCRD is the next step in implementing NASA’s vision of using optical communications for both near-Earth and deep space missions,” says Steve Jurczyk, associate administrator of NASA’s Space Technology Mission Directorate, which leads the LCRD project.

Laser communication starts by encoding data onto a beam of light. This light beam is then transmitted from spacecraft to Earth-based systems. Compared to communications using radio frequencies (RF), laser communications typically display data rates that are 10 to 100 times more efficient.

Laser-based systems have another leg up on their RF counterparts—their potential for a reduced overall size. Since this technology can be smaller, spacecraft communication systems can have lower power, weight, and size necessities, which is important for human space travel.

“LCRD is designed to operate for many years and will allow NASA to learn how to optimally use this disruptive new technology,” says Don Cornwell, director of the Advanced Communication and Navigation division of the Space Communications and Navigation program office at NASA Headquarters. “We are also designing a laser terminal for the International Space Station that will use LCRD to relay data from the station to the ground at gigabit-per-second data rates. We plan to fly this new terminal in 2021, and once tested, we hope that many other Earth-orbiting NASA missions will also fly copies of it to relay their data through LCRD to the ground.”

The LCRD is the successor to the Lunar Laser Communications Demonstration (LLCD). This pathfinder mission was the first of its kind to validate laser communications at a high data rate beyond low-Earth orbit in 2013. The LCRD will expand upon its predecessor, testing its dependability, operational durability, and performance over varying weather conditions.

The LCRD is planned to function between a two- and five-year time frame. As the LCRD orbits in space, the spacecraft will communicate with Earth-based terminals armed with laser modems in California and Hawaii. The relay satellite will include technological additions, such as a space switching unit (similar to a data router), which connects to two identical optical cameras and an RF downlink.

Recently, the LCRD has transitioned into the testing stage, where engineers will examine each component’s functionality after launch conditions. The projected launch date is scheduled for summer 2019.

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

warming up for good. As any good Wisconsinite I keep multiple weight coats around so I can dress for the weather.

I have also spent a little time testing MikesWO9B and Daves WB9OWN EFHW (end fed half wave) antenna. It seems to work. I'm hoping to have some good weather to test it more. It will be a real possibility for a portable QRP antenna. When you operate in that mode you are always looking for high efficiency and light weight in a small package. It's very hard to get all in one package.

Officers and Board

President

Tom Macon, K9BTQ

Vice President

Steve Dryja, NO9B

Secretary

Erwin von der Ehe, WI9EV

Treasurer

Howard Smith WA9AXO

Directors

Frank Humpal, KA9FZR

Mike Johnson WO9B

Newsletter Editor

Frank Humpal, KA9FZR
fhump@milwpc.com

Webmaster

Tom Macon, K9BTQ

West Allis Radio Amateur Club, Inc.
Tom Macon, K9BTQ
3547 S. 95 St
Milwaukee, WI 53228



WEST ALLIS RADIO AMATEUR CLUB, INC.

PO Box 1072
Milwaukee, WI 53201
W9FK
<http://www.warac.org>

***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.