



Official Publication of the  
West Allis Radio Amateur Club

# Hamtrix

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Volume 67, Issue 9 September, 2019

## SEPTEMBER CLUB HAPPENINGS

### Club Meeting

St. Peter's Episcopal Church,  
7929 W. Lincoln Avenue, West Allis  
September 10, 2019 7:00 pm  
Discussion of clubs future  
HF Circular polarized Antena Frank Humpal KA9FZR  
Special Events Bill Reed N9KPH

### Premeeting dinner

Johnny V's Classic Café, 1650 S. 84th St. at 5:00PM.



**NUT NET**  
3.985mhz  
Monday-Saturday  
8:15am CT  
**NUT NET**  
Breakfast  
8:30am fourth  
Tuesday  
of the month

**Milwaukee-Florida Net**  
Every Day on 14.290 Mhz  
7:00AM - 9:15AM ET  
6:00AM - 8:00AM CT

**Sunshine Committee**  
If you know of a member who  
could use a bit of cheer or  
support,  
Barb Garnier (KD9HPS) is now  
the Sunshine Committee Chair.  
Contact her: 414-529-3536 or  
barbsewsblue@gmail.com.

### New mailing address:

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

**See Page 9 for  
2019 award's dinner info**

**WARAC 2-meter net**  
Every Wednesday at 8pm

SEWFARS W9TJK Repeater 146.820 standard (-)  
offset

127.3 Hz CTCSS

if repeater down try 146.55 simplex

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## The President's Shack August 2019

It's after Labor Day and that means we are in for the typical seasonal changes. Our little corner of ham heaven is no different. We've got a few changes heading our way too. Buckle up, it's gonna be a bumpy ride.

First up, in the taking care of old business category, Howard WA9AXQ has picked the date for our final WARAC in the Park event. There is a flyer with the details, but circle Tuesday, September 17th. It will be at Calhoun Park in New Berlin. The action starts at 11:00 and ends when the batteries and excitement dictate. I'm looking forward to getting out one more time. It is always fun.

Before moving on to the new stuff, two items from last month's Hamtrix:

1) Awards Dinner: Sign up!! The date is October 20th and we need a good turn out for a great event. We need you to sign up early as we have to get a head count in. There is a info flyer in Hamtrix a few pages in.

2) Change of Address: We changed the club's mailing address last month. There are a couple of reasons for the change, but the biggest is that the club Secretary no longer has to trek downtown to check the mail. New Berlin PO is a lot more convenient. The new address is :

WARAC

PO Box 511381

New Berlin, WI 53151-1381

Now for the changes part. We have secured a new meeting place to call home. After all the years of meeting in the basement at St. Peter's, we are pulling up the tent stakes and moving to the New Berlin Community Center beginning in October. We will present detailed information at the club meeting, but the long and short is that the new meeting place is at 147th and Cleveland Ave. The meeting room is roughly the same size and is right on grade, no stairs. Also there is plenty of parking at the front door. The floor is carpeted and the ceiling is acoustic tile, so the acoustics should be

significantly better. This should help a lot. It has been a long time in the making, but the deal is finally done. It is really exciting and one of those things on the To-Do list that has finally been checked off. Feels great.

Closing out the changes, we have some significant openings in our club's leadership that need filling with the October elections. This is a significant problem and we called a special board meeting to discuss the options. So now it is time to discuss these opportunities with the club members. It's a big deal and the club needs your help. We normally do not focus on the club's back room operations at meetings, but this time it is different. This will be a big item on the meeting agenda. It is important to get your input in forming how we move forward.

Rounding out the presentation list, Frank, KA9FZR will enlighten us on the magic of HF Circular antenna's. If you were at last months club meeting, Frank's array was being used for the FT8 station. Also up, Bill, N9KPH will have a word or two on Special Events.

There we have it. The above and more will be offered up for the September Meeting. Don't forget Johnny V's for the pre-meeting dinner.

See you at the meeting....

73's

MJ,W09B

Check out our Facebook page!!! Start Posting!!!!  
<https://www.facebook.com/WestAllisRAC/>

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### From the Editor

September is here already but it seems summer just started! Sounds like one more of our park activations will be coming this month. That may be our last for the year. Of course that doesn't mean you aren't allowed to go out by yourself or with friends HI HI

I have fun doing it on my own. It's not that hard to set

Goto page 11

# No General meeting minutes do to the meeting being held in the park . — . — .

## West Allis Radio Amateur Club Special Board Meeting Minutes August 28, 2019

### Officers

Mike Johnson, WO9B  
Steve Dryja, NO9B  
Bill Reed, N9KPH  
Barb Garnier, KD9HPS

### Board Members

Tom Macon, K9BTQ  
Frank Humpal, KA9FZR  
Phil Tollefson, WA9AQL

### Guests

Erwin von der EHE,  
WI9EV  
Dave Garnier,  
WB9OWN  
Dave Engelmann,  
WB9GZP

### CC:

Dave Garnier, WB9OWN  
Howard Smith, WA9AXQ  
Dave Engelmann, WB9GZP

### Agenda:

1. Milwaukee PO Box is now closed.
2. We were approved for fee abatement from New Berlin Rec for use of the Community Center room beginning with October meeting.
  - Pros: Projector screen in room, lots of parking, accessible bathrooms right outside meeting room, electronic locks. Pre-meeting dinner will be held at New Berlin Ale House.
  - Cons: Loss of storage cabinet, (We will clean it out at September meeting and leave it for the church.), no food in room.

We will use one of the other rooms for pizza night in May.
3. Discussion held about loss of President, VP and Secretary and the need to replace them. Steve will still have the trailer at his home. Dave Garnier willing to take on Secretary position. Frank Humpal willing to serve another term in his position. Mike has approached several members who are unwilling to run for office.
4. Discussion held about options for continuation of club without officers. This has occurred in the past. More questions than answers. Constitutional questions? Run with rotating responsibility for running meetings? Be programless unless someone steps up to be an officer? Cut back to quarterly meetings? (Some felt this option would lead to death of the club.)
5. September club meeting will be the last one in the church. Mike will talk to the pastor. We will have the room set up with chairs in a circle to facilitate discussion.

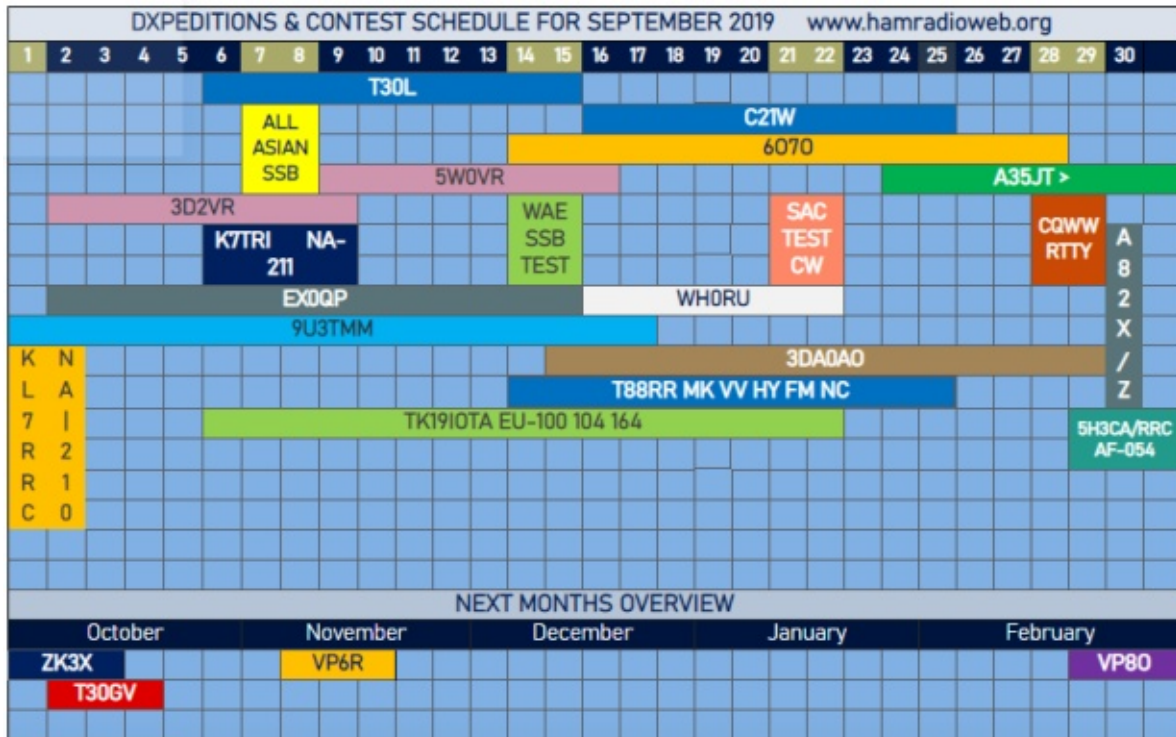
Respectfully submitted,  
Barb Garnier, KD9HPS  
Secretary . — . — .

## DX / CONTEST UPDATE

<http://www.iz5cml.it/dxschedule>

DX: With the fall comes some DX ops. Fun DX ops. Now, if the band condx work out, than we've got something. A little Somalia (6O7O), Samoa (5W0VR), and some European IOTA's (TK19IOTA). A little short of epic, but definitely able to be worked. Keep in mind most will have an FT8 operation, maybe.

Check out the calendar below for new ones, but they all seem pretty laid back operations:



Contests: The fall contest season has begun. In addition there are a couple of new ones to play with. The ARRL is running the Hiram Percy Maxwell contest this whole week. Look for the calls ending with "150". Also this past weekend was the WW Digital Contest for FT8/4 operations.

It is also the season for State QSO Parties. The cupboard is definitely full.

CWops CW Open: Sept 7th <https://cwops.org/cwops-tests/cw-open/>

North American Sprint, CW: Sept 8th <http://ncjweb.com/Sprint-Rules.pdf>

WAE DX Contest, SSB: Sept 14-15 <https://www.darc.de/der-club/referate/referat-conteste/worked-all-europe-dx-contest/en/>

ARRL Sept VHF Contest: Sept 14 – 16 <http://www.arrl.org/september-vhf>

State QSO Parties this month: NE, TX, AL, IA, NJ, NH, ME (I'll let you look them up)

And to check on all the contests: <http://www.contestcalendar.com/index.html> • —• —••

## Meteor-Scatter Communications

Chuck Dellis W9WLX

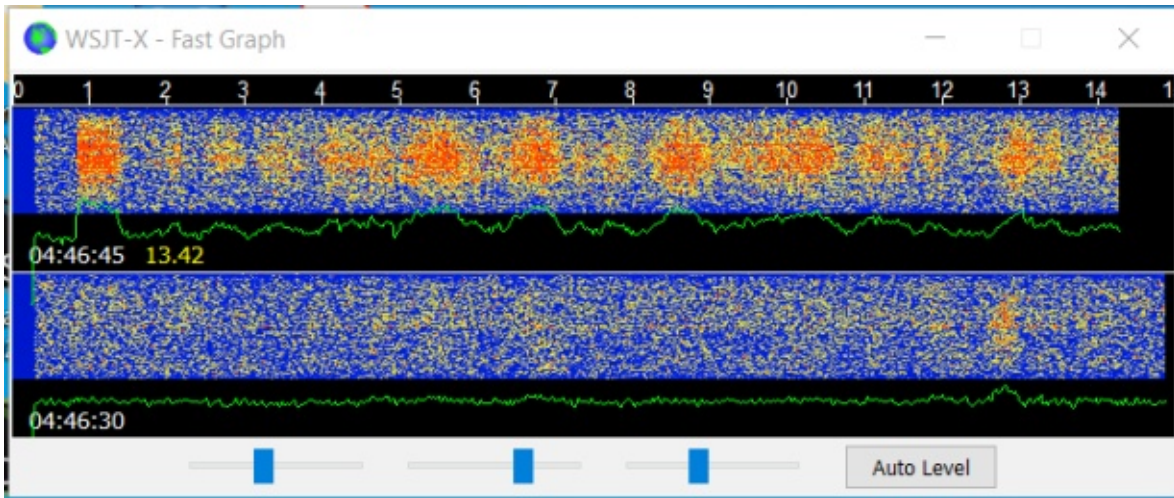
Have you ever tried to have a meteor-scatter (MS) QSO? According to a recent survey published in September 2019 QST Quickstats, 80% of hams have never tried a meteor-scatter QSO. The statistic is surprising since MS is not technically demanding and almost all HF transceivers manufactured in the last 15-20 years have been 6 meter capable. Two other requirements include an antenna and the ability to operate digital data modes. Please be aware that just because you may be able to load up your dipole or tri-bander on 6 meters using a tuner, that does not make it an effective 6 meter radiator. If you attended the West Allis Radio Amateur Club's August 13, 2019, meeting at Pro Healthcare Park, you were able to see live MS QSOs in progress!

So, if you haven't guessed by now, 6 meters is the sweet band for MS. It has the desirable characteristics; the band does not propagate by the ionosphere and the ping time (time the ionization trail is suitable for RF scatter) is long enough to easily support communication. 2 meters has also been used but it is a bigger challenge—ping times are one-eighth that of 6 meters!

Meteor-scatter in the 1960's used high speed CW, 120 WPM. The received audio was recorded and played back at low speed for copying by ear. Fortunately, we've come a long way with digital modes, modern, fast computers, and high-performance transceivers. This led to the development of MSK144 with an effective transmission rate of 250 cps with forward error correction. Even short pings can provide communication. MSK144 was developed by Joseph Taylor, K1JT, specifically for MS on the VHF amateur bands. It is one of the protocols in his WSJT-X suite of digital protocols.

Since mid-2016, MSK144 has become the de facto standard for MS. MSK stands for minimum shift keying and uses message frames of 144 bits with tone frequencies at 1000 Hz and 2000 Hz at 2000 baud. The decoding looks at 7 frames of data, about 0.5 second. The MSK decoder performs summing and averaging in the decoding algorithm. In fact, multiple decoding attempts are made on each chunk of data, concentrating on a different subset or weighting, leading to a higher probability for decoding weak or noisy signals. This averaging necessitates the frequency be known to better than 1 Hz. The decoding algorithm must search frequency offsets in some tolerance and at the same time, search time offsets for symbol synchronization. Most modern transceivers likely meet this specification. The radio the author uses for MS is a Flex-6600 by FlexRadio Systems and it employs an optional GPS receiver as a discipline oscillator. Frequency error is typically measured around  $\pm 1.5 \times 10^{-11}$ , hopefully increasing the likelihood of weak/noisy decode.

Meteor-scatter communication is good for about 1300 miles, so it is unlikely contacts will be made outside of North America. The calling frequency used in North America is 50.260 MHz with the digital signal centered 1500 Hz above using upper side band; the transmit/receive sequence is 15 seconds long. Because MS is sporadic, it is possible for many stations to share a frequency with little interference. But when it gets really busy, QSOs can be completed elsewhere. For instance, the station calling CQ on 260 let's everyone know they are listening on 290. When the responding station responds on 290, the QSO is then completed on 290 simplex and the calling station returns with CQ on 260. The QSO sequence is much like FT8/FT4.



Unlike other digital modes, MSK144 decode is done real time, not at the end of transmission.

043015	Tx		1500	&	CQ W9WLX EN52
043030	-1	1.3	1490	&	W9WLX N1XK EN32
043045	Tx		1500	&	N1XK W9WLX -01
043115	Tx		1500	&	N1XK W9WLX -01
043145	Tx		1500	&	N1XK W9WLX -01
043200	6	5.2	1489	&	W9WLX N1XK R+09
043200	10	6.2	1490	&	W9WLX N1XK R+09
043215	Tx		1500	&	N1XK W9WLX RR73
043230	9	9.5	1495	&	W9WLX N1XK 73
043230	10	10.9	1496	&	W9WLX N1XK 73
043230	7	11.7	1493	&	W9WLX N1XK 73
043230	6	12.3	1494	&	W9WLX N1XK 73
043230	5	14.2	1496	&	W9WLX N1XK 73
043245	Tx		1500	&	N1XK W9WLX 73

With good signals, it is not uncommon to get multiple successful decodes in a 15s transmission.



Portable antenna setup at Pro Healthcare Park. 6 meter loop with LMR 400 feedline.

You don't have to wait for a meteor shower for MS communication. It's happening daily, best from around sunrise to 10 or 11 o'clock AM, independent of sun spots, ducting, or ionospheric propagation. I've been very successful with 100 watts and a 6 meter loop at 25 to 35 feet. Give it a try!

#### Reference

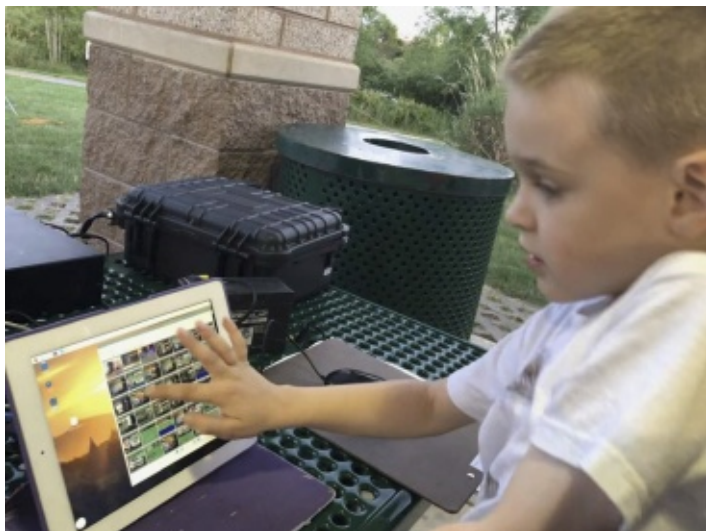
The MSK144 Protocol for Meteor-Scatter Communication; Steven J. Franke, K9AN, Joseph H. Taylor, K1JT; QEX September/October 2017. • — • — •

# See Dave Garnier WB9OWN to pick up your badge he has the following Badges for Pick Up

- 
- KD9LCT Ken Kegley**
- KC9PQD Ron Clayton**
- KC9JET Paul Hass**
- KF9K Jim Nickel**
- W9DC Conrad Harold**
- AA9SY Bob Schwigel**
- KC9REN Dean Berglund**
- KC9SBN Darlene Berlund**
- KD9IGO Fred LeMere**

## August Park Club meeting

Thanks to Lee Todd K9HCW for the pictures









# WARAC ANNUAL AWARDS DINNER

Sunday, October 20<sup>th</sup>, 2019  
5:00 PM QSO Time – 6:00 PM Dinner



New Berlin Hills Golf Club  
13175 W Graham St  
New Berlin, WI 53151  
(262) 780-5200

## WARAC Activites

The year in review

- WIQP
- Swapfest
- Field Day
- Club Contest

## Presentation of:

- 2019 Scholarship Award Winner
- Years of Membership Awards
- Contest Awards
- 2019 Member of the Year

Program Speaker TBD

## Dinner Menu

Your choice of

**Parmesan Crusted Chicken** with choice of Bruschetta or Toasted Red Pepper bread served with Wild Rice and Steamed Broccoli and Spring Green Salad

or

**Pork Tenderloin Medallions** with Cherry Glaze served with Roasted Red Potatoes and Steamed Broccoli and Spring Green Salad

**Ticket Price: \$22.00 per person, tax and gratuity included**

**Sign Up Deadline: October 13<sup>th</sup>**

## Sign Up and Payment Options:

Sign Up at any Club Meeting, See Bill, N9KPH

Mail Check Payable to WARAC (address below)

 **PayPal** to [waracpp@warac.org](mailto:waracpp@warac.org) (Use Friends and Family Option)

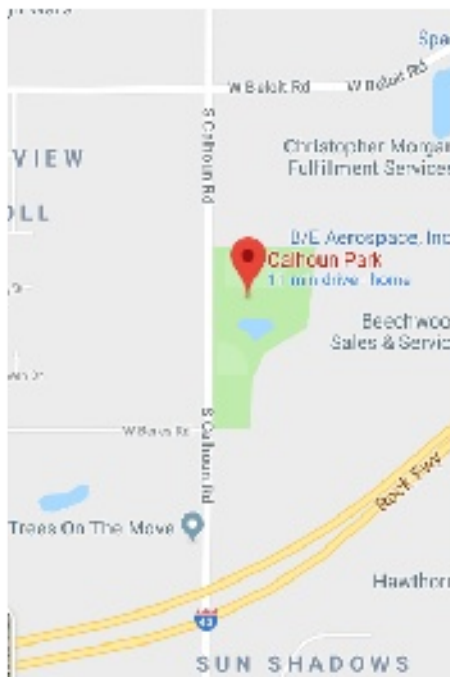
# WARAC MID-WEEK PARK ACTIVATIONS

SUMMER 2019 EDITION

**LAST ONE FOR THE YEAR!!!**

EVERYONE is invited to the next WARAC Park Activation. We expect nothing but great weather and nice temps. Bring a portable radio setup and come and join the fun. Or bring yourself and a couple of good stories.

**WHERE: Calhoun Park  
5400 S Calhoun Rd  
New Berlin, WI 53151**



**When: Tuesday September 17<sup>th</sup> from 11:00 AM to 2:00 PM (or longer!!)**

Very easy to get to. The park is located just south of Beloit Road on Calhoun Rd. The plan is to use the north pavilion. If not look around, we won't be hard to spot.

We could use at least a couple of radio setups. I will be setting up my FT-891 with a vertical antenna for FT-8 operations.

No RSVP required. Just show up and have a great time.

**What about the Weather??** This event is weather dependant. If conditions are bad we will cancel. I will send out an email cancellation by 9:00 AM. This will also be posted on Facebook and the 80 meter Nut-Net so you can keep an eye there as well.

## Report by Jason, N5NU

Hello...I'm Jason and I'm 14. In most ways I am your basically normal teenager in today's world. However, one thing that makes me different is that I am also an extra class radio operator who likes CW.

The fact that it makes me different and distinctive is just one of several reasons that I like CW. The boundaries of CW are limitless. CW isn't just something that everyone talks about and watches (like movies), and it isn't something that you can beat (like video games), it is something that you can really DO. Another reason is that it is exciting, and wherever CW operators are, there is knowledge and knowledgable people. My last reason, is that it makes you overall a better person.

CW makes people distinctive in many ways. One of the ways that it makes people distinctive is that it gives you access to many different awards. Very few people that are on the street have ever heard of the awards called DXCC, WAC, and WAS. If you ask around on CW, most everyone has heard of these. That is just one minute detail that makes CW operators distinctive. CW has a much greater weight in the world than something else such as movies or video games. Wouldn't you rather brag about "I'm a CW op.", than "I play video games", or "I watch movies".

If you were to just look upon CW, an innocent bystander wouldn't think CW is exciting at all. In reality, they hardly think it is more than noise coming out of a black box. They don't realize that this is another person that they are listening to. The pace in CW is in a way similar to that of video games, which is what makes video games so popular. The pace in CW can go from sleeping slow to a sweating chaotic pace. In a way, it practices self discipline.

Everyone thinks that you have to pass 5 death-hard tests and have years of practice before CW really gets to be exciting. Not at all. If there are low elementary grade kids passing the basic test, anyone

else can do it. There are reports all the time out there about a first or second grader passing the tests. In reality, you don't have to pass but one test (5 WPM) and be a newcomer before CW gets to be fun and exciting. (Ever listen to SS / CQ WW on 15/10 meters during sunspot peaks?) Everyone knows the same basic material about the code and electronics, but there are people out there that are top-of-the line / top-notch in other categories. On CW, you can either choose to talk to the rocket-scientist, the astronaut, the carpenter, or the basic working guy with the 9 to 5 office job.

The walks of life of the people that you meet are absolutely infinite. You may talk to the guy that has Bill Gates type money one day, or the one that lives in a simple hut the next. One guy may be in a war-stricken country, one may be in space. One may program the NYSE for a living, one may catch fish. In CW you may be talking to the 95yr old veteran of the depression, or the new guy that is about to be sent to Iraq.

Many couples, romances, and that kind of thing have stemmed from radio because of the reason that it is something that both people have in common. CW is something that both people can do and are on the same level on. One match comes to mind right now. Two long lost friends met on CW, and decided to get married late in life. And why not? They had all the ingredients they needed for a good marriage. And they did...

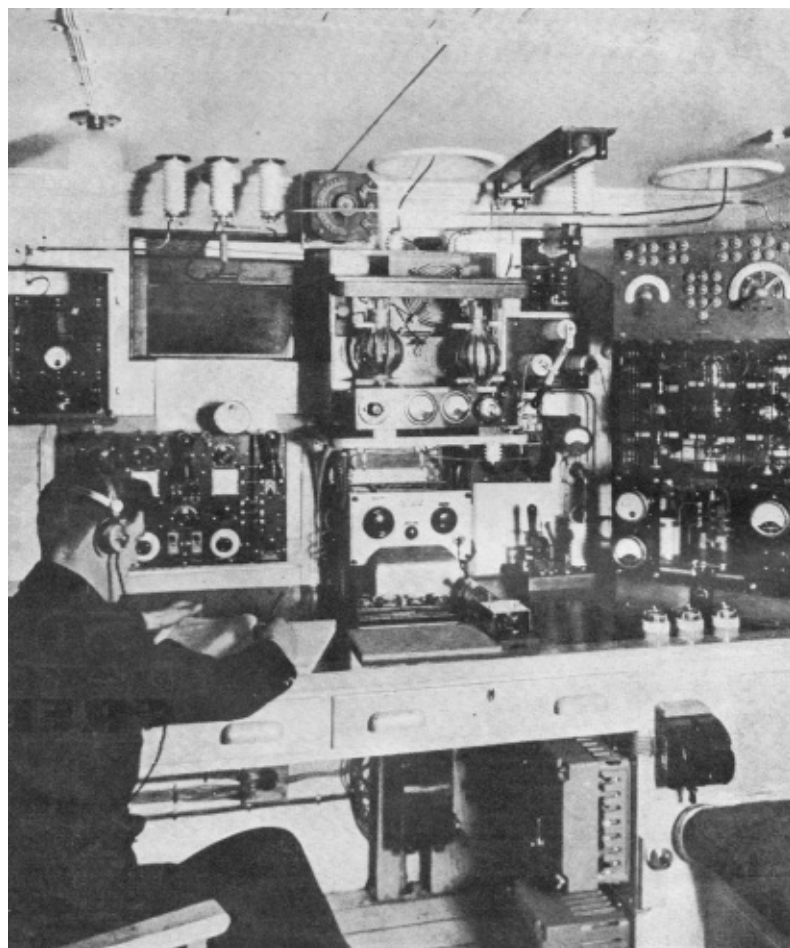
But the thing that overall makes radio special is that you don't have to be the King of Jordan, or Bill Gates, or a Senator of the USA to be an operator. Whenever YOU become a CW operator, you are on the same foundation as the others. You have the same rights that everyone else does on CW. Everyone is on a level playing-field and differences are only remembered in a positive way. That is what makes CW really special.

Report written in 1997 when Jason was 14.



**RMS Olympic Marconi /  
Radio Room - Sister Ship to  
Titanic ...**

**Onboard Radio Operator:  
Master of His Domain, October  
1932 ...**



## Special Announcement from our Friends at the Milwaukee Radio Amateurs Club (MRAC)

This year, the Milwaukee Radio Amateurs Club (MRAC) is celebrating it's 100th Anniversary of ARRL affiliation. The MRAC will sponsor the ARRL Central Division Convention this year, being held at Ham Radio Outlet's Superfest in Milwaukee on September 27-28. Attending will be Dr. Howard Michel, WB2ITX, ARRL CEO along with other ARRL leadership.

Friday evening September 27, there will be a banquet, held at the Hilton Garden Inn Milwaukee Northwest Conference Center Hotel, 11600 W Park Place, Milwaukee, WI 53224. Tickets are \$25 each, all are welcome to attend. Business casual attire is recommended. Register online at the club website <http://www.w9rh.org/> or download the PDF form and mail to the club PO Box.

Thanks to Icom America, we are sponsoring a raffle of an IC-7300 HF radio. Tickets are \$10 each or 3 for \$25. Only 250 tickets will be sold. The raffle drawing will be held at the banquet, you do not need to attend to win the prize. Contact the club at [w9rhmrac@gmail.com](mailto:w9rhmrac@gmail.com) if you are interested in tickets.

More information on all of these items can be found at the club website <http://www.w9rh.org/> or email the club at [w9rhmrac@gmail.com](mailto:w9rhmrac@gmail.com) • —• —••



Editor from page 2

up a small station and see if anyone will hear you. Who knows some day we may actually be glad we can operate off the grid!

I'm almost done with my circular polarized antenna presentation. Will see how it goes.

Not much going on here on ham radio. I'm enjoying the weather and I'm back to "normal" health. Of course the age my mind thinks my body is and what my body thinks it's age is does cause some loud conversations internally.

Don't forget to sign up for the Awards dinner it will be here sooner then we think.

Frank • —• —••

### Officers and Board

President

Mike Johnson WO9B

Vice President

Steve Dryja, NO9B

Secretary

Barb Garnier KD9HPS

Treasurer

Bill Reed N9KPH

Directors

Frank Humpal, KA9FZR

Phil Tollefson, WA9AQL

Newsletter Editor

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[fhump@milwpc.com](mailto:fhump@milwpc.com)

Webmaster past president

Tom Macon, K9BTQ

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