



Official Publication of the
West Allis Radio Amateur Club

Hamtrix

Volume 57, Issue 2 February, 2010

FEBRUARY CLUB HAPPENINGS

Club Meeting
February 8, 2011 7:00pm
Program: Homebrew Challenge

WARAC 2-meter net
February 15 & March 1, 2011 7:00pm
MATC repeater 147.045 standard offset
127.3 Hz CTCSS

UPCOMING CLUB HAPPENINGS

Wisconsin QSO Party
Sunday March 13, 2011



Jim Callow K8IR

2010 WISCONSIN QSO PARTY

By Jim Callow, K8IR, Operator of NG9T/m

I've been active in contesting since I got back into amateur radio in 1997. Since then, I've accumulated a bit of wallpaper and a very few plaques. Each time I did well enough to receive a plaque I noticed a lot of luck was involved, especially when it comes to propagation. Such was the case in the 2010 Wisconsin QSO Party. But you have to be prepared to take advantage of whatever hand the propagation gods hand you.

My first attempt at mobile contesting was inspired by an NCJ article by Jim Stahl, K8MR, and was the 2002 Michigan QSO Party. I've gone mobile in Michigan every year since, and did a few trips in WIQP along the way. That first year I learned the golden
WIQP pg5



The President's Shack February 2011

Had enough winter and snow shoveling? At least we've gotten through January and I'd like to think spring will come eventually, but sometimes I wonder.

Our big winter event, the 2011 Midwinter Swapfest, is in the record books and a great success it was! By several accounts it went very, very smoothly and I think that comes with practice. And, as a team, we've had plenty of practice - this was the 39th consecutive year we have done a January swapfest.

The most important thing about this is that it couldn't happen without you, our members, with additional help from a number of friends and relatives. In all, we had a fantastic team! Thanks to everyone who helped in any way! And thanks to chairman Phil Gural, W9NAW, for a job well done.

As soon as you get a 2012 calendar, be sure to reserve January 7th - it'll be our 40th.

Have you finished your Homebrew Challenge project? The Challenge wrap-up will take place at the upcoming February meeting, featuring a Show and Tell of all your projects. Bring your project and be prepared to show it off. A simple verbal presentation is all that's needed but our projector and a computer will be available if you need it. Contact Chuck, WB9PUB, if you have any questions about the Show and Tell.

Look elsewhere in this Hamtrix for a Challenge-related article by Chuck, and thanks, Chuck, for spearheading our WARAC Homebrew Challenge! Next on our club calendar is a worldwide event sponsored by our club - the Wisconsin QSO Party - coming up Sunday, March 13. All you need to know about the 2011 edition of our Party is now on our website at <http://www.warac.org/wqp/wqp.htm>.

Check it out!

Whether you're interested in contesting or not, you need to be on the air. An interesting aspect of ham radio contesting competition is that you need the cooperation of your competitors to be successful. In other words, the big guns and the little pistols need each other, which means there will be lots of people who want to work you no matter what kind of station you have. As with any party, the more the merrier!

Our March club meeting is on the 8th, right before the QSO party, so we'll be talking about it more at that time.

See you at the meeting!

- Tom, K9BTQ

From the editor's desk

Another month is here and with it a winter storm. I have the day off so have some time at home. The softrock kit I made for the homebrew challenge is together but there is one chip that seems to be bad. I wrote the kit supplier asking if I could buy another one. He generously offered to send me one as soon as he can get to the mail box. Since he lives in Indiana, it maybe a few days. Hopefully I will have a working kit to show. Still the building and troubleshooting has been fun.

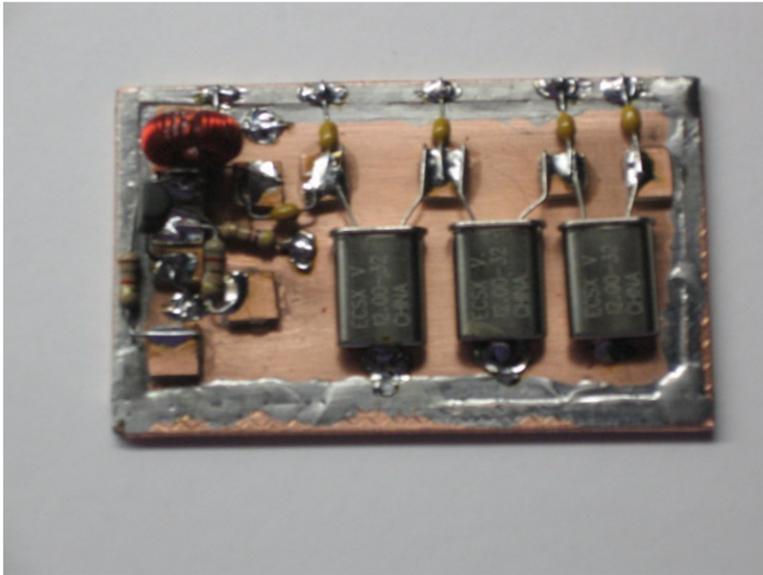
My job is electronics repair but now it is mostly card replacement. It's fun to get back to soldering and probing with a O scope.

My kite antenna project is coming along slowly; the kite works well; my antenna is built and appears to tune up strung horizontal. I finally got to try lifting the antenna with the kite. A minor set back I want to be able to clip on the antenna to the kite string but also have it be weak enough to breakaway if the kite string fails. A wire wrapped around power lines doesn't seem like a picture I want to see or be involved in. So more experimenting is in order will keep you informed.

I downloaded N3FJP's contest program onto my computer. It runs fine on my Ubuntu (linux) system. I will run some tests on it to learn it and to also see if there are any compatability issues. Will keep you inform on my experments.

73

Frank KA9FZR



The WARAC Homebrew challenge.

Well it's now February 2011. The club program is ready. The final show and tell for the members who built their project/s. We have four, or five members who have built projects. The projects vary in complexity and the program should be very interesting. So don't miss this meetings program.

To continue my article on my project:

I downloaded a filter design program and was using it to design a crystal lattice IF filter. I spent quite some time playing with the program and found it to be very frustrating to use. I could not get the component values (shunt capacitors) for the filter to even come close to the G3UUR filter methods and Nick Kennedy WA5BDU's articles on crystal filter design. So when the software fails, I just copied Wes Hayward W7ZOI's design. It's a simple three crystal lattice filter. The sub board is built using Manhattan construction techniques. The board will be installed on the main receiver's board vertically so the board will also shield the filter from stray RF. I used double sided PC glass board material and copper tape to bond the front to the back at the edges of the board. This is to keep the board from becoming a capacitor or a ground

loop nightmare. The picture shows the filter board: At the far right side is a pad used for the output of the filter, that goes to the IF amp's input pin. The pad at the lower left is the DC input supply voltage for the receiver chips front end mixer. The pad at the top left side, which is hard to see, goes to the mixer's output pin. Also it's hard to see but there is a transistor on the board just under the impedance matching coil. It is used to disable the output of the mixer and mutes the receiver when transmitting. The receiver chip does have a mute pin but it disables the discriminator, which is not being used in my CW QRP

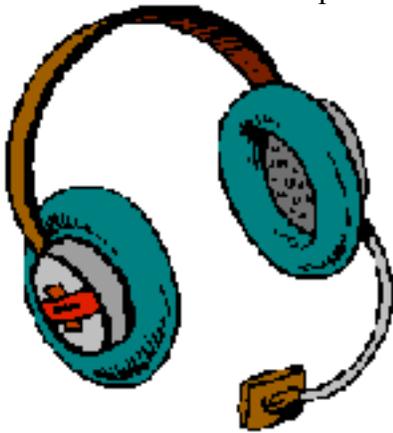
receiver.

I have been playing with the chip on a pin type, prototype board and found it to be very sensitive. Because it is meant for FM service it has no provisions for RF gain adjustment. The IF amplifier also has a limiter built into it. So if the input signal is very strong, the audio will distort. Limiter circuits in FM receivers chop off the top and bottom of the IF output signal to keep from over driving the discriminator. This is not desirable in AM, CW or SSB receivers. So I will be adding a two stage switchable RF attenuator to the input of the receiver chip. I also found out the chip will receive any strong signal even outside of the 40 meter band, so I have to use a band pass filter on the front end of the chip. This is to keep the neighbors transmitter out of my receiver!

I will have both the QRP 5 watt power amplifier and the Minicom 40 Meter receiver ready for Show and Tell at this February's meeting. As they say down south here, See Ya'll at the club meeting!

Chuck Craven WB9PUB

clip art from <http://www.dxzone.com/cgi->



WARAC General Meeting Minutes

January 11, 2011

Introduction

The meeting was called to order at 7:04 PM by President, Tom Macon, K9BTQ.

There were 4 visitors. Overall meeting attendance was 22.

Program

Building Home Brew Nostalgic Equipment

Tom Nickel, KC9KEP, delivered a multimedia presentation describing materials, tools, resources, and techniques used in building home brew designs from the 1920's through 1960's. He also brought several well executed, completed projects for a show and tell session.

Announcements

February program will be Home Brew

Challenge-Show and Tell lead by Chuck Craven, WB9PUB. 3 club members have registered projects so far.

Reminder the Wisconsin QSO Party is March 13, 2011. All club members are encouraged to participate.

Club dues are due! See Chuck Craven.

Discussion

Motion to accept the December meeting minutes as published in Hamtrix.

Phil Gural, W9NAW: Thanks to everyone who helped out with a successful WARAC swapfest. Operationally the swapfest ran very smooth and was well attended.

Louie Golembiewski, W9GSV, gave a brief show and tell—accessory for hanging an inverted vee.

Reminder the NAQP phone contest is coming up on January 15. It is a fun contest with power limited to 100 watts.

Motion to adjourn the meeting at 8:26 PM.

Respectfully submitted,
Chuck Dellis, W9WLX
Secretary WARAC

WIQP

rule of mobile contesting in our second county when my IC706 blew it's finals. Fortunately I had brought along my TS570 as a backup, and we were quickly back on the road. I always try to travel with a backup for everything from rigs to antennas to computers, and the cables that connect them. Fortunately, we've rarely had to resort to the backup equipment, but you sure are glad it's there when needed.

A few other things I've learned over the years:

You need to be able to quickly QSY from band to band and mode to mode. We now travel with antenna for each band in place and easily switched on line.

Mobile antennas are inefficient by their nature, and more so on the lower bands. Whatever you can do to increase that efficiency helps. On 40 and 80 I run modified Hustlers with a DX Engineering top hat, which allows you to use a smaller resonator. I use a 30 meter resonator on 40 and a 60 meter resonator on 80. The theory is to have a more uniform current along the radiating mast. I also try to make sure they are resonant at the frequencies I'm working. I try not to use a tuner, although I have one in line just in case.

That being said, I also have learned that propagation has far more to do with how loud you are when mobile than the antenna. There have been years that I've worked coast to coast on 80 CW in the MIQP (which goes to midnight), and there have been other years where due to propagation and QRN, it seemed nobody could hear me at night on 80.

You quickly find out how much easier it is to be heard on CW than SSB when mobile in contest conditions. Thus most of the mobiles will spend as much time as they can on CW.

It's all about rate. The best part of being mobile is you get that fresh pileup every time you cross the county line. There is a core of stations that will follow you from county to county, and the more counties you

work, the more times you can put a quick 25 to 30 QSO's in the log. I spent a lot of time designing a route to maximize the number of counties we can activate in the contest period. In 2010, we had hoped to do 20, but ended up only making 18.

The mobile's biggest enemy is the power line. The lines along rural roads are often terribly noisy for miles. Sometimes you'll run into an area where you have S9 or better noise, and suddenly you can't hear most of the stations calling. It would be ideal to run the route before the contest to find any troublesome areas, but that's something I've never had the time to do. Do make a note of roads you should try to avoid next time.

If you're blessed with good propagation, as we were in 2010, it's tough to pull yourself away from the pileups to go hunting mults, but it's important to do. There are always some counties where you have a little extra time. This is when I'll go searching. I've found it's easier to get some of those in-state mults during the day on 80 or 75. There may not be as many stations on the band, but there isn't as much QRM, and it's easier to attract attention with your mobile signal. Once the masses have moved down to 80/75 in the last hour or two, it's much harder to be heard.

I've always had someone else do the driving for me. They are an essential part of the team. I had several dedicated drivers through the years. Most recently Eric Janssen, KG9GH has been my driver. Eric works with me on fine tuning the route. Once on the road, he always knows where we are, and how many minutes until the next county line. That's important when making strategic decisions about band changes, and whether there's time to S&P. He also is the one looking out for the county line signs.

So how did I manage to end up on top in 2010? A lot of it was luck, as there are many better and more experienced operators than me out there. We maximized the number of counties, the conditions (propagation and weather) were outstanding

the entire length of the contest, and participation was very high. I worked more stations in 7 hours in Wisconsin than I did in 12 hours the next month in Michigan. And Murphy stayed far away.

But if there was one factor that might have made the difference, it was the short skip on 40 that had been missing for several years. The solar flux was up high enough that I was able to work a lot of in-state mults on 40, and did not have to go down to 80 the last hour. Instead, I was able to keep running on 40, and benefited from a 163 rate in that final hour.

Thanks to WARAC for sponsoring a very popular contest, and to all who participated. Eric and I are hoping to be back in 2011.

*Visit the WARC web site for
QSO Party rules and info
<http://www.warac.org/wqp/wqp.htm>*

January 25, 2011 Board Meeting

Howard Smith called the meeting to order at 7:07 pm.

Present: Tom Macon, K9BTQ,
Howard Smith, WA9AXQ,
Chuck Dellis, W9WLX,
Chuck Craven, WB9PUB,
Jim Wilkins, KC9KEQ,
Frank Humpal, KA9FZR,
and Dave Schank, KA9WXN.

Audit

No progress made on audit of 2008 & 2009 books. Tom Macon will assist in getting the electronic files.

Defining the 2011 Fiscal Budget

Fiscal budget work is in progress. Chuck Craven will have it ready for presentation at the

February board meeting.

Club Manual

The Board reviewed Tom Macon's example for Field Day Planning. No other examples were brought to the meeting. Howard Smith made an action request to have two additional examples ready for the February meeting, Treasurer Responsibilities by Chuck Craven and Hamtrix by Frank Humpal. The complete list of items is under discussion.

Programs

February – Chuck Craven, WB9PUB, Home Brew Challenge

March – Suggested topic, History of Ham Radio, Bill Shadid, WA9MXQ—unconfirmed, Tom Macon to follow up.

April – Suggested topic, Weather Service Tom Krochanski, - unconfirmed, Dave Schank to follow up.

June – Field Day

Additional suggested topics include HD radio and Elmer night.

Scholarship

Howard Smith has a better address for FAR, minimizing the chance of the check being returned to us. Howard continues to work out the details for a possible transition to ARRL.

The financial report was read by Chuck Craven, Treasurer.

The meeting was adjourned at 8:35 pm.

Respectfully submitted,
Chuck Dellis, W9WLX
Secretary WARAC

The Capital City Hamfest
Madison, Wisconsin

Saturday, February 12, 2011
0900 - 1300 (Vendor set-up 0800)

A FUN event for amateur radio and electronics hobbyists... Get together, sell excess equipment, see friends, buy gear and parts you need, meet folks you've met on the air, and beat the winter blues.

Memorial U.C.C. Fellowship Hall
5705 Lacy Rd, Fitchburg.

Admission - \$5.
Under age 13 - Free.
Vendor Tables - \$10.

Visit the website
<http://www.wd8das.net/hamfest>
for more information.

Thanks...

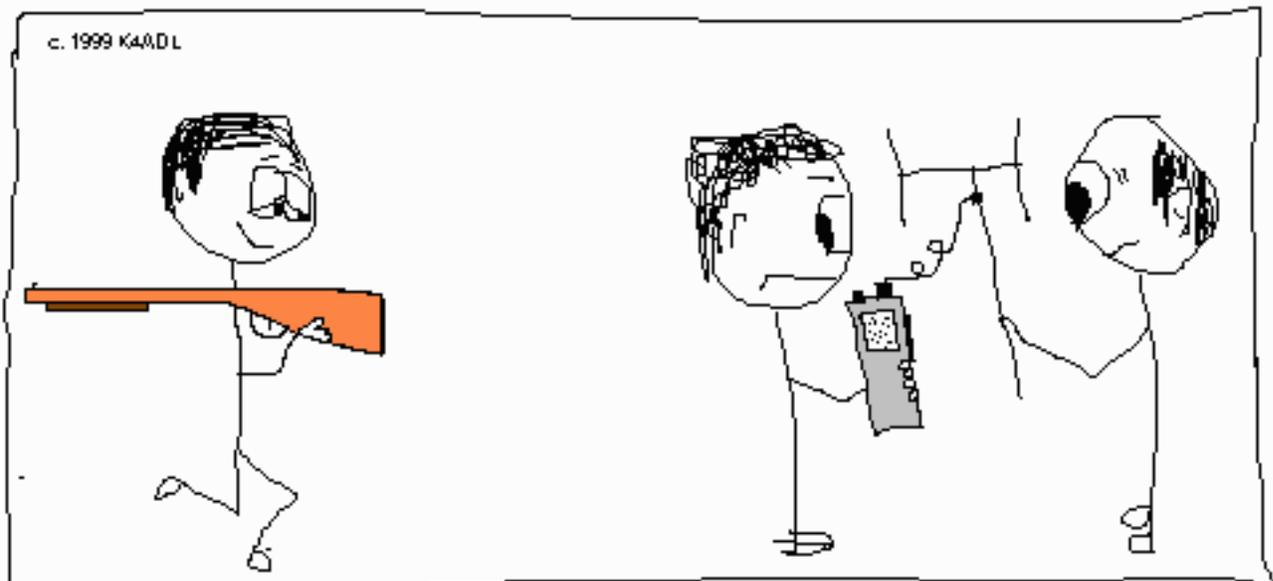
Steve WD8DAS

sbjohnston@aol.com



from <http://www.dashtoons.com/Editors.html>

cartoon from www.qsl.net/k4adl.



NEVER ONE TO PAY CLOSE ATTENTION AT CLUB MEETINGS,
PHILLIP ARRIVES INCORRECTLY EQUIPPED FOR THE ANNUAL FOX HUNT.

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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.