click here to go to web site

JANUARY   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
January 13,2015 **7:00pm**
Program
Arduino presented by Howard WA9AXQ
Join us for a pre-meeting dinner
at Johnny V's Classic Cafe
1650 S 84th St at 5:00pm

Swapfest
January 10, 2015
This year in the Expo Arena
Waukesha County fairgrounds
More info on pg 5

Wisconsin QSO Party
March 15, 2015 - 1800Z to 0100Z
March 16

WARAC 2-meter net
Every Wednesday at 8pm
MATC repeater 147.045 standard offset
127.3 Hz CTCSS

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 January 2014

The Holidays are over and it's cold out, so it must be **Swapfest** time!. As you know, we will be in the round Arena building this year, so we'll be in less familiar surroundings. Adapting to this additional challenge makes it even more necessary for everyone possible to help out.

So let's all turn out and make our **43rd Swapfest** another success! The proceeds of this event fund many of our other activities, so that's another incentive.

Chairman Phil reports that table sales are good, perhaps in part because our date is six days later than last year. It seems that attendance drops when our date gets too close to New Years. See you all there!

The program at the upcoming meeting will be all about doing projects with the Arduino processor. There are so many cool things you can do with these microcomputers and it's not difficult. Howard's presentation will whet your appetite.

In addition, Phil will have preliminary Swapfest results so we'll talk about that, too. Your suggestions and comments on how things went in the new facility will be welcome.

It's barely two months until the **2015 Wisconsin QSO Par**ty on **Sunday, March 15**! Time to start thinking about your operating plans - possibly operating mobile? - or setting up a portable station in another county?. Or, how about a group of members getting together to do a multi-op station? Anyone interested in spearheading this? Please let me know if you are. Along with this, it would be great to activate our club call, W9FK.

The March 10 meeting falls right before the QSO Party, so WIQP will be the focus of that meeting. We will cover a number of aspects of the QP. Stay tuned for details.

Were you on the 10 Meter contest in December? Personally, I was unable to spend more than 3 or 4 hours on the air but the band seemed good for most of the contest. What was your experience? In addition to the above topics for the upcoming meeting, we'll also talk about the 10-meter contest. Meanwhile, send in your logs, both to the ARRL and to Chuck, W9WLX, for our club contest. You can also bring 'em to the meeting.

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

Start of a new year which means Swapfest time! Hopefully many of you will be able to attend or were able to attend (depending when you get to look at Hamtrix). As I write this we are having a normal January cold snap with the temperature hanging around zero. It's kind of a shock on the body. Not that it is that cold, but December was so warm my body hasn't gotten used to the cold, like it is normally by this time.

You will notice I replaced the web pages at the end of Hamtrix with some new ones I found interesting. If you get Hamtrix in e-mail format you should be able to click on the red web page addresses and your computer will take you there.

I also wrote up an article on Puppy Linux. This is one of the more portable Linux distributions out there, If you have an older computer that has been antiquated by windows XP no longer being supported, this is a good distribution to experiment with. It can be run from a memory stick or cd/dvd (which ever format you can boot from) It will really make your old machine look like it is running with turbocharging.
(*continue pg 7*)

WARAC General Meeting Minutes
December 9, 2014

Introduction
The meeting was called to order at 7:06 pm by President, Tom Macon, K9BTQ. Overall meeting attendance was 24 including 2 visitors.

Program
The evening's program was dedicated to the upcoming Swapfest. Phil Gural, W9NAW discussed the current setup and rolls for the members. Everyone's help is needed. Members should show up at 5:30 to 6:00 to assist with vendors and security. Bring along an HT for communications (147.40).

Business
Motion was made and accepted to approve the November meeting minutes as published in Hamtrix.

Worked All Wisconsin Counties Award was discussed. Mike Johnson, WO9B, went through the new award criteria. We now accept Wisconsin QSO Party contacts without QSL cards. Let's start issuing some certificates

Howard Smith WA9AXQ reminded everyone that November is Dues month. All non-life members need to fill out the renewal form and return with the annual dues.

10 Meter Contest is coming up. Don't forget to forward logs to the club for our WARAC 10 Meter version of the contest. Details in the Nov Hamtrix.

Need to perform an audit of the Clubs Books for 2013. Two volunteers are needed. Bill Reed, N9KPH, volunteered. Tom will make another volunteer selection for the January Audit.

Next month's meeting will be about Arduino programming/projects and the swapfest wrap up. Howard discussed detailed aspects of the projects.   Future programs to be Higgins Tower service, West Mountain Radio, Spotting clusters, LoTW.

St Charles, IL Swapfest on Jan 18th: See Howard for a free ticket. We have 2 available.

Revised 2014 Membership Booklets are available at the meeting. Members welcome to a copy.

Announcements
2 meter net every Wednesday at 8:00 pm on 147.045, + offset, PL 127.3. Join in!
CQ Tuesday, 1:00 pm, 3rd Tuesday, in Waukesha at the New China Buffet.
The Nut Net breakfast is at Genesis Restaurant, 8:30 am, 4th Tuesday of the month.

Dinner at Johnny V's, 5:00 pm before the WARAC club meeting.

The meeting was adjourned at 8:27 pm.
Respectfully submitted,
Mike Johnson, WO9B
Secretary WARAC

Arduino What's that?

In case you haven't noticed, it is the latest craze in the Maker world. And, the Maker movement is the latest in what we hams used to know as home brewing (electronics, not beer). Now, it is a whole industry by itself. And, it covers lots of areas, including ham radio.

The Arduino is a credit card sized computer using an Atmel ATMega328P chip, and has header pins that bring out important signals. Special cards called shields plug into the header pins to provide additional circuitry to interface to other real world circuits. For example, there are shields for an LCD display, Ethernet, BlueTooth, GPS, or even a small motor. The list is quite long, and there is even a shield that can be used to build a prototype shield for some special interface.

Since Arduino is a computer, there needs to be some way to create and load a program into it. That software is a free download, and will install easily on any XP, Win 7, or Win 8 based computer. The software program is called a 'sketch', and the programming language is a subset of the 'C' language. There are lots of libraries available that support various shields, and there is a way to create your own sketch for your device, and add it to an existing library.

Two excellent books on using an Arduino with ham radio were published in 2014. My favorite is 'Arduino Projects for Amateur Radio' by Dr. Jack Purdum, W8TEE and Dennis Kidder, W6DQ. This book provides lots of projects to do that become useful accessories for your hamshack. The text includes both the sketch and a detailed explanation of how the sketch works. Several projects from this book include 'A CW Automatic Keyer, A Morse Code Decoder, and a Directional Watt and SWR Meter.

The second book is 'Arduino for Ham Radio' by Glen Popiel, KW5GP. This book is very similar, again providing the sketches and an explanation. Some of the projects overlap, but several from this book are a CW Beacon and Foxhunt keyer, an RF Probe with LED Bar Graph, and a CDE/Hygain Rotator Controller.

Another interesting aspect of this technology is that TenTec offers the Rebel and the Patriot, 2 QRP transceivers, which are based on the ChipKit UNO32, an Arduino type device using a 32 bit processor running at 80 MHz. TenTec provides the sketches that ran these transceivers, and hams have done amazing things with the TenTec Rebel, by adding features to the TenTec sketch. The Rebel is essentially an Arduino shield for an RF device.

The investment to play with this technology is quite low. The Arduino board itself is less than $30, the Arduino software is a free download. Your computer will need a USB port, but those are common in most computers built after 2000. Your time, curiosity and willingness to experiment is also required, but that should be the fun part.

I would like to encourage many of you to try this new technology. There are lots of interesting projects already defined, but there is always room for your ideas. If there is enough interest, the club could do some quantity purchases of Arduino boards to reduce the price even further. *(continued next page)*

I am willing to come early to club meetings to help anybody who is interested.

I will have several hardware examples, including the TenTec 506 Rebel, at the meeting. I will also bring the books that I mentioned.

See you at the meeting. Bring a friend!

73..
Howard, WA9AXQ

2015 Swapfest—It's in the Expo Arena

No doubt that by now you have read or heard that the WARAC 43rd Annual Midwinter Swapfest, scheduled for January 10th, will in the arena. Suffice to say that this change was required by a schedule   conflict.

Admission
Yellow admission tickets are required for entry before 8:00AM.   Note that those helping someone still need a yellow ticket before 8:00AM No one with a Purple ticket may be admitted before 8:00AM. Orange tickets are for tables only, not admission
Note that we will have signs with the above information to be posted near all active doors. If you are watching a door, make sure that a sign is posted. Don't allow doors to be blocked open any more than necessary. No hand stamps before 8:00AM

Don't forget to bring
Your club hat and badge. (A few club hats are available if you don't have one). Your 2-meter HT - set   to   147.40   simplex

Equipment Sales
Better items - take to table A011 (near food area), and make arrangements with John, K9IAC.
Parts/components and less valuable items - take to table A022, near south door (Louie, W9GSV)

Location of Key Items - note location of these items so you can give directions
Ticket drum - right of stage (near food sales)
The Table sales and information table will be near the ticket sales area. Look for Chuck Craven
Testing room - Oconomowoc Room - through North door, to the right.
Rest rooms - through North and South doors, then left

Captains - contact these people for your job assignments or if you have questions
Main Floor - Chuck Dellis, Howard Smith
Balconies - Frank Humpal, Mike Johnson
Loading Area - Steve Dryja

Ticket Sales - Tom Macon
Chairman - Phil Gural
Also
Coffee and donuts will be provided at the food service counter before 8:00AM.
Get your door prize/admission ticket and food ticket from Tom

How is this swapfest going to operate? There are some changes. First of all, sellers will have to bring in their material thru the two loading areas on either side of the stage. WARAC members will be assigned to man carts and hand trucks. The idea here is to assist all sellers get their items to their assigned table(s) in an expedited manner. After unloading by the seller, the WARAC manned cart will return to the loading area for another assignment. Sellers in the balcony areas will have their material delivered to the nearest balcony stair, unloaded, watched over by a WARAC member assigned to that stair. Depending on how much material a seller has on site will determine how soon another vehicle can be in position to start unloading. This is going to be a learning experience for all of us.

Puppy Linux
http://www.puppylinux.com/index.html (click on website)

With Windows XP no longer being supported, it is understandable that people are no longer willing to take a chance putting it on the Internet. This leaves many people with an older working computer which doesn't have much of a use. One use for the older computer is a platform to experiment with the Linux operating system.

There are numerous flavors of Linux available each one customized for a special use. The one I'm writing about is a tiny one that can run out of your system memory without even using a hard drive. This allows a couple things: one is you don't have to worry about the data you have on your hard drive. Because it runs in the memory and the programs are basic, you will find that their speed and response are amazing even on an old machine.

There are many machines out there so I will not try to give a cookbook description of how to install it on a particular machine.

The general plan is to go to the web site and down load the ISO file. Look at the computer and decide what input device your computer allows to boot from. CD or memory stick are two possibilities. After deciding on device load the ISO file that you down loaded. Remember to ensure that the file is bootable if you just load it as a file you will not be able to boot from it.

Once you get all that done, start your boot. First you will be choose your language and time zone, you then you will be booting up. To hook up to the Internet you go to set up and select what option applies to you. With a little luck you will be up and going.

One nice thing about Linux distributions is they include a lot of programs. You will have a browser, text writer   etc. If you get this far you can play with it and enjoy it. If you plan to use it again on that computer there options to save all your set up options to a small file. Then next time you use
(continue pg7)

Ham Radio on the Internet
All new this issue (click on web)

http://www.pcmag.com/article2/0,2817,2472998,00.asp?mailingID=9C509E690C4AD445CABF7377FF5275E8?mailing_id=1123129
Useful steps if you believe your idenety has been stolen

http://americandigest.org/mt-archives/driveby/worlds_simplest_electric.php
Interesting linear motor for a demo

http://securitywatch.pcmag.com/security-software/330210-pc-infected-which-antivirus-does-the-best-cleanup?mailingID=C70C65E8D5DD3CB720E45A41F26767B9?mailing_id=1130470
Check how your antivirus compares to others

http://www.wirelessdesignmag.com/news/2014/12/drones-show-how-tornadoes-form?et_cid=4325815&et_rid=353748193&type=headline
Using Drones to measure tornadoes

http://www.ecnmag.com/news/2014/12/5-ways-make-your-email-safer-case-hack-attack?et_cid=4331264&et_rid=353748193&type=headline
Steps to secure your email

http://www.wirelessdesignmag.com/news/2014/12/security-flaws-allow-global-cellular-eavesdropping?et_cid=4333660&et_rid=353748193&location=top
 May not be the best to tell secrets on your cell phone.

Anyone can submit websites for this column. I'll check them out and include them. The editor

(Editor)
I found this was very good when I was traveling for work. I could come up on Puppy using only the memory in my work computer. I didn't have to worry about leaving any virus or info of where I spent my off-time. There are also options to let you keep info in a separate file on your hard drive or a memory stick. It is also useful for reading or deleting files on your hard drive if you find a need to do that.
73
Frank KA9FZR

(Puppy)
it you will be ready to go.

I hope this help any of you who want to experiment with Linux or find use for an old computer.

Have fun 73
Frank KA9FZR

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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.