

Signals From S.A.R.A.

WØJH

©2011 The Stillwater Amateur Radio Association
An ARRL Affiliate & Special Service Club

October
2011



Split Rock Lighthouse

Let's hope that the gales of November don't come early as in the Gordon Lightfoot song when S.A.R.A. members trek to Split Rock Lighthouse for another November WØJH Special Event, "Remembering The Edmond Fitzgerald". It's all happening November 5th & 6th at Split Rock Lighthouse. Check out the full details on page 5 of the September Signals and at www.radioham.org.

Remembering The Edmund Fitzgerald

ANNOUNCEMENTS

Monthly Meeting Saturday Oct 8th

Boutwells Landing 'Town Hall' located at 5600 Norwich Parkway in Oak Park Heights, MN.

The program will be

FLDigi

presented by Skip Jackson (KSØJ)

**Pre-meeting Breakfast & Coffee
7:30 at Joseph's Restaurant!**

Did YOU miss the

SARA Fox Hunt Challenge?



Saturday September 17th was a great day for a fox hunt. Of course every day is a great day for a fox hunt if you enjoy such things, and enjoy we did! No fewer than seven teams tried their best to find WAØTDA and the fox.

Results & more on page 5

SARA Nets & Roundtables

HF Phone Roundtable Daily except Tuesday & Thursday @ 20:00 Local on 1.902 MHz± with alternate 1.955 MHz.

SARA Repeater Weekly Net Wednesday 9:00 PM Local WØJH Repeater 147.060 +114.8, Echolink WØJH-R Node 306408

HF CW Tuesday 19:30 Local 28105 KHz RVSSN Slow Speed CW.

Handiham Nets

VHF/UHF Daily except Sunday 11:00 Local on the NØBVE Repeater 145.450- & 444.65- (114.8), Echolink HANDIHAM Node 494492. Also: IRLP Node 9008 & WIRES #1427. NCS varies.

HF CW Friday 08:00 CST, 7.112 MHz informal slow speed CW Net. W8IRT NCS.

S.A.R.A. is a proud affiliate of the Courage Center Handiham System

A banner for Handiham.org featuring a radio control panel on the left and right, and a central orange box with the text "handiham.org Ham radio for people with disabilities".

handiham.org
*Ham radio for people
with disabilities*

LETTER FROM THE PREZ – October 2011

Fall is fast approaching. The record heat spells are thankfully on their way out and we can again have our windows open to enjoy the fresh air.

This is one of my favorite times of the year. Antenna work seems to be more satisfying when you can do it without sweat running into your eyes, hihi. My 2 meter/440 Diamond antenna was again on my project list due to a high SWR.

The other day, I finally decided to put procrastination on the back burner (good idea as the white stuff is coming) and try to locate and fix the problem. This is the second time this year I looked into this problem. During the earlier incident, I checked out the coax run from my shack up to the roof by disconnecting the coax from the antenna and attaching a 50 ohm dummy load to the coax. I returned to the shack and hooked up my antenna analyzer to the other end. That appeared to indicate that the coax was o.k. as the SWR reading was 1.2:1 .

I thought I had the problem fixed the first time when I re-attached the coax and the SWR went from an earlier reading of 4.2:1 to 1.2:1. AaaaaHHaaaa! I mistakenly assumed it was probably due to corrosion. I cleaned both the connectors on the coax and the antenna and everything seemed to work o.k.

It was about a month later during the excessive heat that the problem came back. This time the SWR reading taken in the shack showed 3.9:1. I repeated the same procedure as I did in the past and found that the coax run was o.k.

I had talked to a group of friends on 80 meters and told them that I had a Diamond antenna that was acting up. One of them said he and his club in Alexandria had a similar problem with several of their 17' Diamond antennas. He add-

ed they solved the problem by disassembling each antenna and soldering jumpers between the mechanical rod connections.

So.....down came the antenna and I began the job of taking apart all of the fiberglass joints to expose the interior 'guts' of the antenna. When I got to the base, I didn't see any type of nut, screw or slip ring that needed loosening or removal. I didn't have a manual so I went to the internet to see if I could find the manual or assembly instructions on the Diamond web site. I was finally able to locate an assembly diagram but it did not indicate how to open up the base.

The site did give me a customer service number for Diamond antennas. I called and to my surprise was put in contact with one of the Diamond engineers. We talked about the problem and the possible causes. He told me I should be able to find a metric hex screw that needed to be taken out in order to separate the interior antenna from the fiberglass shell. I was impressed with the time that this engineer took to help me. And, he was aware of the fact that I had bought the antenna second hand and didn't have a manual. Consider this a plug for Diamond antennas, hihi.

I returned to the work at hand after that conversation and found what looked like a silicon-filled hole on the base. The metric hex screw was located underneath that silicon and came out easily once the silicon was removed.

An ohmmeter showed me that there didn't seem to be any problems with the mechanical connections between antenna segments. I took them apart, cleaned and then re-assembled and tightened them. All of the bridges made between segments with capacitors seemed to be in good shape without corrosion.

The engineer told me to look at the base section and make sure that the soldered taps in

See Prez. page 4

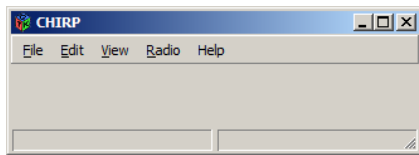


© 2011 WØØXB. All rights reserved. A single copy of this material may be reprinted for noncommercial, personal use only. "ØXB," "ØXBism," "ØXB Special," "Counterpoise" and the "Counterpoise" logo are trademarks of WØØXB.

Dave is missing in action this month, something about vacation and taking pictures for the newsletter.... I've never understood the concept of vacation for retirees but maybe when I grow up and retire I'll figure it out...

K3PID

CHIRP is a free radio programming tool!



CHIRP is a FREE cross-platform, cross-radio programming tool. It works on Windows and Linux (and MacOSX with a little work). It supports a growing list of radios across several manufacturers and allows transferring of memory contents between them. Popular radios like the TH-F6A, KG-UVD1P/UV2D/UV3D, TM-V71A, and many Alinco, Icom, and Yaesu models are supported.

More at:

<http://chirp.danplanet.com/projects/chirp/wiki>

We are interested in hearing reports about how this software works, so if you decide to download and try it, drop me a line and we will share your experience with our readers. The software interface (above) is so strikingly simple that it is likely to be useful for blind hams using screenreading software. Thanks!

Pat, wa0tda@arrl.net

Cognitive Radios?

You knew it was just a matter of time, right?

The invention of the software defined radio (SDR) opened up a whole new field of possibilities. Just think of the possibilities when you combine the flexibility of SDRs and the dedicated computer with real artificial intelligence (AI). Cognitive (see page 9 for



AN/PRC-148 JTRS

definition) radios are here at least for the military. The AN/PRC-148 JTRS (Joint Tactical Radio System) Enhanced Multiband (JEM) Inter/Intra Team Radio (That ain't no ARC-5 folks) works between 30 and 512 MHz in 256 channels. It has selectable output power from 0.1 to 5.0 watts (QRP) and the receiver sensitivity of -119 dBm. Besides

FM and AM, the AN/PRC-148 can use dozens of digital protocols and with built-in GPS it knows where it is at all times.

Basically, the radio establishes contact with the intended station then looks at all available spectrum to identify noise (QSB), interference (QRM) and propagation then decides upon a usable frequency. It notifies the other station then jumps to the new frequency and mode (QSY). It does all of this at 33 times per second. All of this activity is unnoticed by the user. Much more than just frequency hopping, it looks for the best place to hop. The AN/PRC-148 JEM also has fully programmable cryptography that supports the requirements of the National Security Agency's (NSA's) crypto-modernization program and is certified by NSA to protect the confidentiality of voice and data up through the Top Secret level. Also available are a wide range of accessories for various dismantled, fixed or vehicular use including 20- and 50-W power amplifiers (QRO), antennas, and remote control. I wonder if Icom knows about this?

DE K3PID

Prez From page 2

the base coil were connected and sound. I did and they were in good shape.

There's not too much to these antennas, so that caused me to suspect contact problems with the N connector (female pin) in the base. I cleaned the pin and then took a pair of needle nose and carefully squeezed the segments slightly together, believing that would give me a better connection.

I put everything back together, put the antenna back up on the roof, connected the coax and checked out the connections with my analyzer. It now showed 1.1:1.

What's interesting to note is that when I originally put up the antenna, I used a PL259 to N connector adaptor because the old antenna I was replacing used a PL259 connection. This time, I replaced the chunk of coax from where it exits from my house to the antenna with a new piece of coax and a

proper N connector. We'll keep our fingers crossed, hihi. It's been working the past three days so

On another subject, I did want to briefly touch on the point that a motion was made, seconded and passed at the September meeting to decrease next year's annual membership dues to \$20. This was done, as explained, to help our club grow. I explained that the increase in dues last year was done at that time because the Board believed the legal fees and software needed (for 501C3 status) justified that increase. Your present Board believes the increase was not warranted.

It's our belief that a new constitution (if passed) will allow us to reduce dues even further for family and associate members.

Our Eyeball QSO's have again returned and it was very enjoyable to see a good turnout during the first meeting on September 15. If you haven't been to one in a while, come join us!

73,

Keith Miller – AGØH
SARA President

On our website

www.radioham.org

Our full-service website is a resource for current information, last-minute changes in meeting times and events, web-only stories, and archived news.

Minutes & Reports

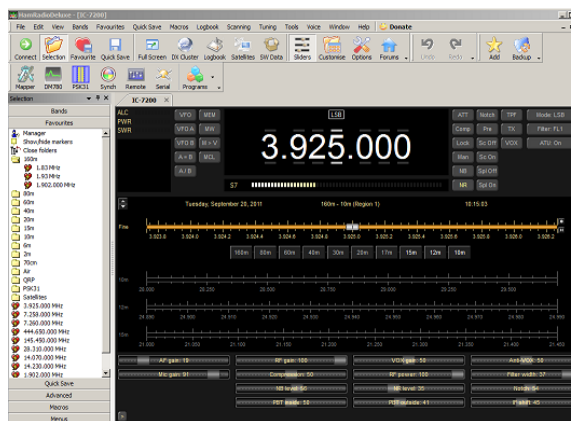
- Board Meeting Minutes
- Monthly Meeting Minutes
- Treasurer's Reports

Review the Sept 2011 meeting minutes and reports.

Newsletters

- Signals from SARA

Access archived newsletters using the menu in the left sidebar.



Ham Radio Deluxe rights sold: ARRL is reporting that rights to the popular rig control software suite Ham Radio Deluxe have been sold. Read the story on ARRL.org:
<http://www.arrl.org/news/view/hb9drv-sells-rights-to-ham-radio-deluxe>

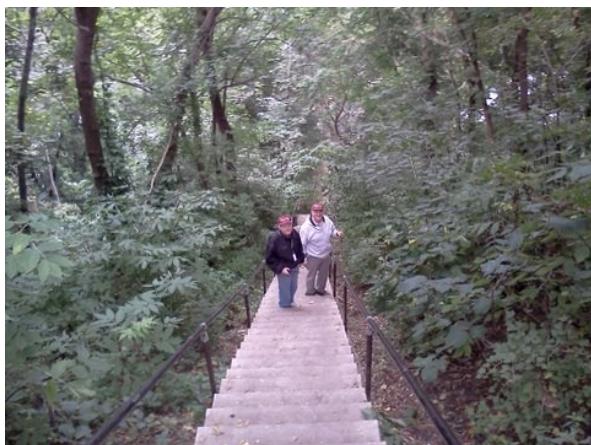
There were donuts and hot coffee to bolster the enthusiasm of the fox hunters at Benson Park. At 9:30 sharp the fox was on-the-air



Foxy Devil!

Pat WAØTDA

sending a Morse code message for 1 minute out of every 5 minutes. Just to make it interesting the fox randomly set its output power to 5 watts, 0.5 watts, or 0.050 watts for each transmission. Now if that weren't enough, the fox was actually on the belt of WAØTDA so the transmitted pattern varied as Pat turned around and moved about.



Do these steps really go all the way to the river?

To top it off, Pat stood at the top of about 3 miles of steps in the northeast corner of Pioneer Park in Stillwater with the implication being that the fox was "down there" ! The hunters prevailed and three teams officially located the fox by about 11:00 AM. Everyone returned to Benson Park for picture, camaraderie, and left over donuts... yum!

Checkout Pat's Handiham Fox Hunt article in the October issue of World Radio Online.

www.worldradiomagazine.com/



Careful Guys! One wrong step and... well we won't go there!



1st place goes to the team **"F.O.R.C.E."** from left to right: Dan KØTI, Pat WØERP, and Ron KØRJW

Continued page 6



As you can see, this newsletter is made up of member submissions, so get the lead out and start submitting –



The team "Dead Reckoning" with Mike KØKJS (left) and Ron K3PID took 2nd place with a little dumb luck!



Rounding out the field David Zehner KIØZ (left) and Joe Zwirn WØXL

Honorable mention goes to Orcy WØQT (I was disappointed that Ory's car didn't have a hole in the roof for the antenna mast), Bill NØOS, Pat Flyn, and Bob WØGAF.

Thanks to all. I hope everyone had a good time and is looking forward to next year just like the Twins and the Vikings hi hi.

DE K3PID



Here's a specially-designed "fox" transmitter used at a hidden transmitter hunt during a Handiham Camp in Ventura County, CA one year. Note the cable that locks it to the tree trunk.

ADC12Dxx00RF

A real game changer!

National Semiconductor has announced its latest high speed analog-to-digital converter. The ADC12Dxx00RF is a 12 bit ADC that samples at 3.6 GHz. it can directly sample RF as high as 1.8 GHz and it has a noise floor of -150dbm. Big deal you say? Well it really is a big deal because putting one in your next smart phone or tablet PC or software defined radio will eliminate ALL of the analog components like the RF amp, LO, Mixer, filters yes all of the traditional "tuned" circuit devices in the wireless receive device!! That's about 1/3 the component count folks.

Yes it does have a down side. As you might imagine it draws considerable power at those sampling frequencies as much as 4.4 watts and that could be hard on the batteries. But what the heck? With 1/3 less hardware, you have room for bigger batteries right?

DE K3PID

BTW: For those who are keeping track, TI (Texas Instruments) recently purchased National Semiconductor. I don't know what that will mean. We'll have to wait and see...

WorldRadio Online introduces new mobile apps, goes to pay-for model

Beginning with its November 2011 issue, "WorldRadio Online will be available for a variety of online platforms, including those for tablets and mobile devices. As a result of this upgrade and additional enhancements we're making to this product, we must return to paid single copy and multi-issue subscriptions for the magazine."

That is the announcement from the CQ Communications mailing list, letting us know about the pending availability of Worldradio Online on mobile devices. Annual cost: \$9.95

When the new system debuts, we will report on it. You will want Worldradio just for the great "With the Handihams" column!

The S.A.R.A.

NOVICE CHRONICLES

We'll give this a try even though I have received only a couple responses from members. Perhaps a couple of issues will inspire others. ed.



K3PID Licensed in 1961 as KN3PID

I am not sure who triggered the spark of ham radio in me but it must have been my high school shop teacher. For the life of me I don't remember his name or call but he taught the wood shop and the electronics shop. There

were three of us who studied together to take the novice exam and we all ended up passing on our first try. We took the test separately from W3BFF, Cecil Bjorn, in Towanda PA. I remember that Cecil was really into frequency measuring and consistently placed 1st, 2nd, or 3rd in the annual ARRL Frequency Measuring Tests, typically spot on or within a few cycles of the frequency. His equipment was a Collins station and a 3 rack Navy clock from his MARS connection, which gave him precise frequency standards and an oscilloscope. Anyone remember how to interpret Lissajous patterns?

I remember that in my CW test from Cecil I copied the word BULLALO and figured I had blown it but he smiled and said that he had sent the L's as a test to see if I was copying 100% or guessing the content. The three new 1961 novices were KN3SFD – Dick, KN3SEG – Lyndon, and me, KN3PID.

My station was pretty basic. I got an advance on my allowance and bought a used E.F. Johnson Challenger that would run 70 watts on CW (Novices were limited to 75 watts). With Cecil's frequency measuring ability he was the local "street" supplier of crystals. He would get boxes of military crystals



The E.F. Johnson Viking Challenger. 70 watts of CW! Nice rig!

and grind them down to raise the frequency then give them away to his novice students. Initially I tried using an old National NC-44

receiver but I couldn't keep it running for some reason. I secured another advance and bought a brand new NC-105. Lyndon, KN3SEG (Sugar Easy George) lived on the next farm about 2 miles away and we had a regular code practice schedule on school mornings after chores and breakfast before the school bus came. My first "real" contact was with a friend of my father's in New Jersey. I don't remember his call but I do remember that he probably had a bit of trouble copying my shaking fist. The novice license was two years and not renewable so we all upgraded within the next year and dropped the N from our calls. With college, career, and family, I



The National NC-105. Not a bad receiver for \$100 brand new!

drifted away from ham radio for several years and at that time you had to have proof of activity to renew so my license lapsed. I got back into it in the mid 1980s as KA0TUT and when the FCC announced the first vanity call group would give preference to hams who wanted to get back a lapsed callsign, I got back K3PID and upgraded to Extra. I enjoy CW and Fox Hunting and recently started doing a little DX. Beside SARA, I belong to FISTS, SKCC, QCWA, and the Collins Collectors Association. My current rigs are a Yaesu FT1000MP, Hammarlund HQ-145, Central Electronics CE-20A, Collins R-390, and an Army T-368. Of course there is the OXB Special in the trees.

73, K3PID



The River Valley Slow Speed CW Net

I've had to put RVSSN on extended hiatus as I prepare for a radioactive iodine scan in mid October. I know that sounds scary but it will be my 5th scan and the only real problem is the lack of T3 thyroid hormone makes me extremely tired. The scan should be done and I should be back on drugs (synthetic T3) by October 18th so we will pencil that date in for the next net.

For those of you who missed the "special" video at the September meeting, point your browser to:

www.archive.org/details/gov.dod.dimoc.23735

It's a WWII CW Navy training film showing the proper way to adjust and use a straight key.

In the meantime try your hand at some on air activities:

- The Flying Pigs QRP club has lots of activities. Visit them at <http://www.fpqrp.org/>
- The FISTS CW club is at <http://www.fists.org>
- The SKCC has a web site at <http://www.skccgroup.com>
- And on October 18th at 7:30 local join me on the RVSSN.

When: Tuesdays at 19:30 local time.

Where: 28,105 MHz

**What: Slow Speed CW
(as slow as you want!)**

73 es CUL, K3PID



Mark Your Calendars!

Remember the Edmond Fitzgerald



Split Rock Lighthouse

Special Event Station

November 5th & 6th

Upcoming SARA Monthly Meeting

Presentations

- **Oct 8th**—Skip Jackson (KSØJ) – FLDigi
- **Nov 12th**—McCarthy (WN4GMT) – DXLab Software: Better DXing thru Software
- **Dec 10th**—Jon Platt (WØZQ) – HF/VHF Roving (including preparation for Minnesota QSO Party)
- **Jan 14th**—Election of officers for 2012

COME ON IN...

THE WATER IS FINE!



Happy Halloween!

Here are some SARA suggestions for scary costumes:

- QRM
- QRN
- Pink Ticket

In This Issue:

Split Rock Lighthouse Special Event	Page 1
The SARA Fox Hunt Challenge Results	Page 1
Letter from the Prez	Page 2
Counterpoise	Page 3
Cognitive Radios—It had to happen, right	Page 5
The ADC12Dxx00RF A Real Game Changer	Page 6
The SARA Novice Chronicles	Page 7
RVSSN & Coming Attractions	Page 8

cog·ni·tive /Pronounced [kɒg-ni-tiv]

adjective

1. of or pertaining to cognition.
2. of or pertaining to the mental processes of perception, memory, judgment, and reasoning, as contrasted with emotional and volitional processes.



SARA
Needs
YOU!

Get involved, Make a Difference,
Have fun!