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St. Paul Radio Club Ground Wave

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KØAGF

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NEWS AND NOTES FOR MARCH 2018 — Volume 78, Issue 3

Monthly Meeting

March 2, 2018

UST OWS LL54

7:00 pm Socializing

Membership Meeting 7:30 pm

PROGRAM

AERO

Monte Thue (KBØD) will fill us in on the Association of Emergency Radio Organizations (AERO) and its training materials for emergency radio communications. Since its inception in the 1980s to the early 2000s, over 300 hams had graduated from AERO courses. Following a lull in activity, AERO was re-introduced with new training material in 2017. An additional 82 hams have taken an AERO class in 2017 under the new classes.

Monte is a member of the Eden Prairie Radio Club. He is developing an Emergency Communications (EmComm) group supporting Eden Prairie Fire Department's Emergency Management organization. He is an instructor and on the board of directors for AERO.

Presidential Ponderings

We just finished our annual auction in a new location--it was less well attended than usual, partly because of a scheduling issue with the St. Cloud Cabin Fever Reliever Hamfest. Apparently they checked the ARRL calendar to find a date that wouldn't conflict with other hamfests. I had looked into posting there, but that needs to be done three months in advance and we hadn't pinned down the new location in time. Next year should be better.

There was a lot less stuff in the live auction-- we had set up about four rows of tables and used less than two. We added a few to the silent auction side as it was quite popular. As the live auction proceeded, we actually moved some items from the silent side to bump up the action.

I did a good job of not looking at too many things at the auction in order to hold down my spending. I didn't bring as much as normal, but things

(Ponderings, continued on page 2)

Dale's Details

Dale Maroushek, NØPEY

Spring is here, at least it will be on the 21st. The seed and plant catalogs are arriving in the mail, the patio and grill displays are all shining, and the garden stores are filled with fresh stock for us to plant soon.

What's new for Ham Radio? Low end of the sun spot cycle--limiting hours for communications and lots of noise. We should be seeing some improvement as the cycle continues. Our local "Hamsfests" start with Eau Clair, then Buffalo, Brainerd, White Bear and, finally, Superior. The old gear will get passed around from those who have it to those who don't. I'm sure the new gear will be ready for the "Dayton" Hamvention, so save some money for that. The reports from last year's first at the new location in Xenia sounded favorable, with a few adjustments needed. Get your reservations in now.

(Details, continued on page 2)

UST is Tobacco-Free

UST's St. Paul and Minneapolis campuses are tobacco free.

In the St. Thomas policy, "tobacco" is defined as any lighted cigarette, cigar, pipe, clove cigarette, hookah smoked products, electronic cigarettes and any other smoking product, as well as smokeless or spit tobacco, also known as kip, chew or snus. Promotion, sale and distribution of tobacco products and merchandise, including any items carrying tobacco logos, also are prohibited on the campuses or at any university-sponsored events.

The OWS building is located on the University of St. Thomas (UST) South Campus.

From I-94, take Cretin Ave south about a mile to Grand Ave. Turn right, then park in the ramp on your left or the surface lot on the right. In general, on-campus parking restrictions are not enforced after 6:00 p.m. on Fridays, but do not park in spots with parking meters unless paying or displaying a handicapped placard.

Enter the building just north of the parking ramp and take the elevator (in the hallway to the right) or stairs to the lower level. LL54 is not far from the stairs.

For detailed maps, see www.stthomas.edu/campusmaps.

OWS: Owens Science Hall

Contact Kim Schumann in Disability Services at 651-962-6315 or kjschumann@stthomas.edu for any accessibility requests.

(Ponderings, continued from page 1)

did work out--normally I sell a bunch of little things and have to haul home all the big heavy stuff. I lucked out this year--a big tote of miscellaneous antenna parts and hardware sold, so I did not have to find a place to bring it back to. Yay!

The week before the auction, I met up with Barbara Zurn, the daughter of John (Jack) Potter (WAØEBP) who died in 2004. She donated three boat anchors to the club: a Hallicrafters SX-101 receiver, a Hallicrafters VFO, and a two- and six-meter tube transmitter combo. All were sold at the auction. Jack was a radio operator on a destroyer in WWII. Not sure if he was an SPRC member, but maybe members will remember him.

The net to the club for the auction was very low compared to recent years, quite a bit less of what we usually send off to the ARRL Spectrum Defense Fund.

On some ham forums, mostly QRZ, there have been controversial discussions concerning the ARRL leadership, etc. I've seen this in many other groups over the years. Divisiveness seems to be common in the general media about everything, I think of it as polarizing, divide and conquer junk—left vs. right, for vs. against nonsense. We should keep an eye on our hobby (along with many other things) hopefully with an open mind, until we can get by all of the hysteria and make some sense out of what the issues really are. There are a bunch of different posts about this subject on QRZ-- too many are just foaming at the mouth with few facts. But if you want to check out the issues, there are a few threads that are mostly good discussion, including one started by Fred, the owner of QRZ.

Now that I've stirred the pot ;)

73 de John, KDØCAC

(Details, continued from page 1)

Hopefully, our new location for the Auction at Roseville Lutheran will remain available. It worked very well, however attendance and saleable items were down this year. The ARRL donation will be a small one this year. Thanks to all the great helpers who spent time making it work.

Still looking for a Banquet speaker, some topic for mixed company, not solely radio related. And the yearly surprise: Who will be the Ham of the Year? If you have a speaker in mind or a nomination for HOTY, please contact your Board members.

Only four months until Field Day. Never too early to volunteer for a leadership position or operator/logger time block. Historically, and an obvious indicator of how time has changed Ham radio, both Clubs used to have fully-staffed 24-hour operation of CW and phone stations. SPRC actually had waiting lists of people ready to help, from beginning to end. Let's make 2018 a reincarnation of that kind of teamwork, all we need is your early commitment so we can plan accordingly.

Dale, NØPEY

Building Blocks

Jay Maher NJØM

As time permits, I have been gathering the parts I need to build the NorCal 40A project. This week I sent off an order to kitsand-parts.com for toroids and a few other items I couldn't get through Digi-Key and didn't have already. The disadvantage of buying parts to populate a bare board versus a full kit shows up in the higher per-unit cost of low quantities. With commonly used parts I do tend to buy a few extra to get the price break and have some on hand. The challenge is to keep them organized and readily available. I doubt

that I'm the only one in this group with an out-of-control junk box.

I was pleasantly surprised to find a gift in my mail recently. Bob Reid (NØBHC) saw I was going to put together a Manhattan version of Chuck Adams' (K7QO) Colpitts oscillator and kindly sent me one of the printed circuit boards he had made. It's a very nice compact board. We have come a long way from the crude boards we used to crank out in the basement, but even those have improved. Hobbyist friendly materials, software, and pcb manufacturers give you dozens of pathways from design to finished board for not a lot of money.

Where to start if you want to make your own pcb? Unless your design is simple enough to draw out on copper clad with a resist pen, you'll need a pcb layout program. Don't panic, there are several good free options. One of the most common has been EAGLE (Easily Applicable Graphical Layout Editor), originally put out by CadSoft in 1988 and bought up by AutoDesk in 2016. Part of its popularity was that it had a tiered license structure where you could get a pretty effective program with a permanent license at the free or lower-cost levels. After 2016, they moved to a monthly/yearly subscription model for the paid tiers though they still have a free level. The free level is limited to non-commercial use, two schematic sheets with no more than two layers, and a maximum board size of 80 square centimeters. EAGLE has quite a bit of support available online and in print. Some say all that material exists because the program isn't that easy to use. I used EAGLE until a point where I couldn't figure out how to panelize board copies in the free version and moved to a different program. I found the new program (DipTrace) much easier to use than EAGLE and didn't go back.

(Building Blocks, continued on page 3)

(Building Blocks, continued from page 2)

DipTrace is not as well known as EAGLE though it seems to be equally as capable. Bear in mind that I am a casual hobby user and doing very simple layouts, so not likely to press the limits of any of these programs. As mentioned, I found DipTrace much more intuitive and easier to get up and running. Like EAGLE, they have a tiered license structure and a free version. With DipTrace, the free non-commercial version is not limited by board size but has a two signal layer, 300-pin limit. At the time, I requested an academic license which upped the pin limit to 500 pins. I see they now offer the 500-pin upgrade if you email them and explain your non-profit use. They will then send you a key to unlock the higher limit. Also note the DipTrace free version specifies two *signal* layers so you could make a four layer board if you wanted to use a ground and power plane. I was happy with the program and it suited my needs well.

Skip ahead and it has been a few years since I've used DipTrace. Knowing I'd be back at the bottom of the learning curve anyway, I decided to make a change and jump into KiCad. As an open source design tool, there are no practical limitations on board size, layers, or schematic sheets at the price point we all love—free. As features are added to the program, they will be available to all and not just those who buy in at a higher tier. You also won't need to switch to a different tool or pay for an upgrade when you've designed a widget that you'd like to sell. Companies like Digi-Key have added parts data to the KiCad libraries and made generation of Bill Of Materials (BOM) files much easier. Other KiCad developers have added the ability to compare price and availability from vendors like Mouser and Digi-Key and easily paste items into order forms. I'm just scratching the surface, but KiCad is looking pretty

good.

What about the learning curve? When I made that switch from EAGLE to DipTrace seven or eight years ago, I experimented with KiCad in parallel and dropped it because it was too hard to learn. I'm enthused because the program has gotten much easier to use since then, though the way they handle libraries is still rather convoluted. I've used two resources this time which I would highly recommend. One is a series of YouTube videos by Chris Gammell entitled "Getting to Blinky 4.0". The second is an ebook by Peter Dalmaris that I purchased on Amazon (KiCad Like a Pro). With liberal use of the back arrow to repeat steps, I've made it through the layout process for a couple of boards. The true test will be when I use KiCad to do some boards without all the hand holding. I'll let you know how that goes.

Fri Mar 2	7PM Socializing followed by 7:30 PM SPRC Membership meeting. UST classroom OWS LL-54. See Page 1.
Sat Mar 3	10AM VE testing. Ramsey County Library, 3025 Southlawn Dr., Maplewood. Contact Leon Dill, W@COE@arrl.net or 651 688-9964
Sat Mar 3	9AM Circuit Builders. OSS 415 UST Campus*
Fri Mar 9	7PM SPRC Board meeting, OSS 121 UST campus (Alternate location is OSS 415) **
Sat Mar 10	9AM Circuit Builders. OSS 415 UST Campus*
Sat Mar 10	8AM – 2PM Eau Claire ARC 31 st Annual Equipment Auction, Saving Grace Lutheran Church, 2124 East Ridge Center, Eau Claire, WI
Sat Mar 17	9AM SPRC Breakfast. Denny's, 1664 University Ave, west of Snelling.
Sat Mar 17	After Breakfast. Circuit Builders. OSS 415 UST Campus*
Sat Mar 24	9AM Circuit Builders. OSS 415 UST Campus*
Sat Mar 24	8AM – 1PM 37 th Annual Midwinter Madness Hobby Electronics Show, Buffalo Civic Center, Buffalo, MN
Sat Mar 31	9AM Circuit Builders. OSS 415 UST Campus*
Fri Apr 6	7PM Socializing followed by 7:30 PM SPRC Membership meeting. UST classroom OWS LL-54.
Sat Apr 7	10AM VE testing. Ramsey County Library, 3025 Southlawn Dr., Maplewood. Contact Leon Dill, W@COE@arrl.net or 651 688-9964
Sat Apr 7	9AM Circuit Builders. OSS 415 UST Campus*
Sat Apr 7	9AM – 1PM Brainerd Amateur Radio Club Hamfest, National Guard Armory, 1115 Wright St. Brainerd, MN
Fri Apr 13	7PM SPRC Board meeting, OSS 121 UST campus (Alternate location is OSS 415) **
Sat Apr 14	9AM Circuit Builders. OSS 415 UST Campus*
Sat Apr 21	9AM SPRC Breakfast. Denny's, 1664 University Ave, west of Snelling.
Sat Apr 21	After Breakfast. Circuit Builders. OSS 415 UST Campus*
Sat Apr 21	Northern Lights Radio Society Aurora 2018. First Lutheran Church, 4000 Linden St. White Bear Lake, MN 55110
Sat Apr 28	9AM Circuit Builders. OSS 415 UST Campus*

*Circuit Builders is each Saturday morning if someone is available to open the lab and there is no conflicting activity. Check the SPRCCB Google Group to confirm that the lab will be open.

** Depending on business to be considered, Board Meetings are sometimes held electronically. Check with an officer or board member to confirm that the meeting will be at UST.



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ADDRESS CORRECTION REQUESTED