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St. Paul Radio Club Ground Wave

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KØAGF

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Club Repeater: 145.310 MHz
114.8 kHz Tone
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NEWS AND NOTES FOR MAY 2020 — Volume 80, Issue 5

NEXT (ON-LINE) MEETING: FRIDAY MAY 1, 2020

- 6:00 PM Board Meeting (all are welcome to watch)
- 7:00 PM Fellowship and (your own) Refreshments
- 7:30 PM Short Business Meeting with Program Following

Program

Our May program will feature SPRC member Ben Otto, KE0RFZ. The topic of the presentation is "How to get on HF digital modes with any SSB capable receiver."

Dale will send a link and instructions on how to participate in the on-line meeting. Please follow carefully.

Dale's Details — by Dale Maroushek NØPEY

Anyone bored to tears yet? If you thought watching paint dry was a joke, it's not. I do like the "Better 6 feet apart than 6 feet under" line we have seen. And there are many other comical barbs flying around the web, so enjoy them when they drop in.

On the Friendly Net and 2 Meter net last night, I think it was Matt KE0VQC, who alerted us to a rumor that HRO was looking to put a store in the area. After much checking and searching, we found the key into the survey: <https://www.hamradio.com/newstore.cfm>. This should get you to a page that allows you to tell HRO why you think they would benefit from a store in the Metro area. I think we should spread this around and if a multitude of local hams respond, we may get a radio store back in town. The last part of that project is, if they come, we have to support them with our purchases. Radio net check ins have been growing weekly as bored hams find their radios and turn them on. We had 14 on HF and 20 on VHF. You are all welcome and I still have the open invitation for anyone wanting to be a net control for either net.

Our May meeting will be an on line adventure again, and that is all I know. President Don will probably have details and instructions in his column.

Hopefully, we will hold VE testing on June 6th, but anything can change. The next date would be July 11th at Magic Tailgater. Other VE teams may find time and place, so watch the announcements. Also, Leon, W0COE, our VE Chief, has announced the he would love to be grooming a replacement Chief. If you are interested, talk to Leon. The Club received the Thank You letter from the ARRL for our \$1700 donation to the Spectrum Defense Fund. I have it and we can show it and file it sometime later.

I have been assisting Lou Michaels, WD8NOV, who is getting back into radio after many years. His forte is photography, some examples can be seen here:

(Continued on page 2)

(Continued from page 1)

www.louthephotoguy.com. I could go into the trials and tribulations that we have had, first with the Bao Feng HT's and add-on antennas, then the Btech mobile that was a nightmare to program and operate. We finally went with the Yaesu FT-2980, the new no fan rig, just one big heat sink. The first antenna choice was the small canister type to keep it simple. We discovered his apartment is metal framed and metal studded, a Faraday cage for RF. Tried a Tram model 1181 mag mount quarter wave and it seems to work fine. The hard part about this is Lou is the only one that travels. Due to the Covid 19 thing, Deb doesn't want me exposed. Anyway, Lou is now looking to get another radio installed in his vehicle. The radio should be here by May, so if you are good at installing radios in Ford Explorers, Lou would love the help, at your house.

On the other side of town, I have Mike Thompson, KB0RCS, a returning ham from 12 years ago. He has lots of dated gear and is doing a great job working through it and getting it back in order. His wife Louise, won't let him out or anyone in, so there are emails and phone calls, texts and smoke signals flying back and forth. Hopefully we will all be able to meet again in person.

Programs: our thanks go out to all the presenters we have seen. I'm not sure what will be happening for May yet, but we have Tim, WD9IGX, with two ready to go, Ben, KE0RFZ, and Ralph, N0AWN, with one each in waiting. We need nine a year, plus a banquet style one, so please keep them coming.

Building Blocks – Jay Maher NJØM

It has been a few months since the last installment and a quite a few things have changed. I am writing this on the evening of what would have been the 2020 SPRC Banquet and feeling disappointed we are not gathering to enjoy it. Staying healthy is the important thing though, so please be safe. While I am still working full time (and thankful for that), our situation has opened some time for more solitary activities.

Reading is always high on my list but now whole evenings are free to indulge myself if I choose. Vasily Grossman's *Stalingrad* is now on the bedside table when it would have been a vacation book before. Nothing like a Russian novel to make you feel like things could always be worse. For radio reading, a few months back Bob Liesenfeld, WBØPOQ, posted a link to a British radio constructors newsletter, *Hot Iron*. Their first issue was in 1993 and they are still active. Loads of interesting stuff there to keep you busy. You can find a repository at <https://www.w4nnp.net/hot-iron-directory/>. Got to love those Brits (and all their contributors). For something closer to home, if you are an ARRL member you probably heard they are now making all four of their publications (including QEX) available online to members for free.

Time on the bench has also been a benefit these days. Last time I mentioned an audible circuit tracer that was a 2003 EDN Design Idea. It is a pretty simple circuit that produces slow ticks on an open circuit, increasing in frequency to a 2 kHz tone on a short circuit. A link to a copy of the original article (with schematic) is here - <https://www.radiolocman.com/shem/schematics.html?di=61821>. I built this up a few different

(Continued on page 3)

(Continued from page 2)

ways. The first was with a 4013 as I didn't have the 74C74 chip on hand (they are scarce now apparently). It worked but was quite faint with the piezo I had. When I picked up another piezo from Axman, I found a 74C74 in one of their bins and that works fine. Eventually I received a still actively produced 74HC74 from Digi-key when I ordered some other fun stuff and that works as well. Now I need to find a suitable enclosure that will fit comfortably in the hand. With a pair of banana jacks on one end, I can use a probe set or insert a clip lead in one jack with a banana plug/brass rod probe in the other. If you try this out, note a few things. First, if you wire the 74C74 as shown and it is very faint, add a line from Vss to ground. Second, if you use a 74HC74 (or I think any other version than the 74C74), be sure to use the correct supply voltage and not the 9 volt battery. I ran it on 3 and 4.5 VDC and it was fine either way.

If you still have time on your hands and are looking for a new way to enjoy the hobby, you could join Scott Tilley, an amateur living in British Columbia, in his search for zombie satellites. He recently added the LES-5 (a military communication satellite launched in 1967) to his list. <https://www.npr.org/2020/04/24/843493304/long-lost-u-s-military-satellite-found-by-amateur-radio-operator>

Bang! Lightning Just Hit – by Scott Holisky NØAR

The time is right for thunderstorm season! Bring on the rumbles and the lightning flashes! Now is a good time to look over your station and decide what preventative measures you can take to minimize any damage from that rare lighting event.

It might not be a direct strike to your antenna, maybe just the tree that your wire dipole is in. Maybe it hits the tree on the boulevard and the stroke follows the water main back into the house. You don't need a big tower and antenna to be a recipient of lightning damage. Whatever the mechanism of how it gets in, there's nothing good about finding smoke in the ham shack, worse if it causes damage to the house or it's occupants.

My recommendation is you buy or borrow the ARRL *Grounding and Bonding*, read up on what you should do, and do it! You should at least be in compliance with the NEC requirements. (The NEC is the National Electrical Code).

In my shack the radios don't stay connected to the antenna selector switch. If the weather looks nasty I'll also pull the AC power to the station. My goal is to protect the house from having an uncontrolled arc inside. Everything is tied and bonded to the station/house ground. This bonding is not only good for lighting control but is essential in eliminating ground loop hums and stray RF burns you could get without it. Remember that lightning bolt just traveled miles and a jumping a few extra feet isn't going to stop it, so help it find a safe path to ground.

Lastly go get yourself a good smoke detector for the shack. In fact buy two and stick the spare in the laundry room. Then when we meet you can ask me about that adventure!

(Continued on page 4)

April Board Minutes— by George Power WØGCP, Secretary

Board meeting held via internet.

Before we had a quorum, there was discussion of Field Day, our club license trustee, the CDH ARC, and maybe other stuff but, as no real decisions were made, we can re-visit these things in May.

President Don Kelly (WA6ZMT) called the meeting to order at 6:35 PM. Board members present: Don; Vice-President Dale Maroushek (NOPEY); George Power (KØGCP), Secretary; Allan Klein (WØNLY), Treasurer; Ben Otto (KEØRFZ), board member-at-large. Interested parties present: John Crabtree (KCØG).

Reports and topics discussed.

Don reminded us that the election for club officers is due in May. Because of the virtual meeting “newness,” we are not ready to try elections this spring. It was moved (and seconded) that the elections be held in October, 2020, and the motion passed unanimously.

Dale said that the program schedule will be reworked to accommodate the COVID-19 issues. Tonight’s meeting is Matt Holden ((KØBBC) via GoToWebinar.

George said the March meeting minutes were posted in the Ground Wave and that he has not received any corrections.

Allan reported that the funds are in good shape: Education fund balance is \$1167, General fund, \$7228, Repeater fund \$702.

Dale has our 2019-2020 membership at 144 as of the meeting start.

Ben volunteered to update our inventory of club-owned equipment. Ben will send out a query to members, to see if they have club equipment. Allan said he will send a list of the stuff he has acquired, and probably bring it to the club’s storage room at CDH.

John Crabtree asked if Dallas Fogg had any of the club’s equipment, and Ben will check with Dallas. George, Allan and Bob Walsh (WCØJ) will help Ben complete the inventory.

The banquet has been cancelled due to COVID-19

We had a discussion of how to hold meetings via the Internet. Dale suggested that the club purchase the business version of Zoom (about \$140/year), or that the president should investigate further and buy something. Ed Jacobson (WBØVHF) discussed potential problems with “Zoom-bombing” and other types of interference, but Zoom is working on security issues. Dale moved that the club buy Zoom, Ben seconded it, and the motion passed unanimously. Suggestions included broadcasting all of our meetings via Zoom, as it allows absent members (snowbirds) to participate.

We adjourned at 7:10 PM.

April Meeting Minutes— by George Power WØGCP, Secretary

Our meeting held via internet. President Don Kelly (WA6ZMT) called the meeting to order at 7:30 PM.

Items carried forward from board meeting:

The treasury is in good shape.

Our membership is a 144 for the 2019-2020 membership year.

The COVID-19 has messed up a number of club activities: VE sessions have been cancelled; our club breakfasts have been cancelled; and our plans for Field Day are on a “to be determined” basis. Pete Guldán (KDØSQJ), our Field Day coordinator, reminded us that we could each operate from home as single stations using our own callsigns, or in a loose formation as a club (must be within a 1000’ circle). Stay tuned for details.

We had 36 members attending this meeting via GoToWebinar.

Our presenter tonight was Matt Holden (KØBBC), our ARRL Dakota Division Director. Matt provided tonight’s web connection via GoToWebinar. His presentation was in two parts.

First, he gave us updates on ARRL activities including changes in the organization structure, elections of new officers, and work with the FCC to protect our 3 and 5 GHz bands from commercial poaching. He said the ARRL is working on improving the ARES Connect database, to make it a useful tool. Work has been slowed as the offices have been closed, with people working from home, due to the state (CT) mandates.

Secondly, he gave us a tour of his expedition of St. Kitts and Nevis islands (east of Puerto Rico) early in March, 2020. His slides made it look like a great vacation place. In addition of operating radios, he showed pictures of the important après-radio life with food, beverages, etc. He got home just as the virus hit China.

The meeting finished about 8:30 PM, without the usual raffle.

Editor's Notes — by Jeff Iverson, WB9DAN

Been staying home like we are supposed to. I have made very occasional outings to the grocery store, which I really shouldn't since I have underlying conditions, but staying home can drive you crazy. Last time out I wore a kerchief on my face. I felt like the Sundance Kid. Jean is working on making us more appropriate face masks. Now that the weather is nice, we have been getting in some walks around the neighborhood, which is nice.

I developed my first roll of color film, which is actually easier than black and white, except for the need for temperature stability. For my birthday I received a Cinestill TCS-1000 which is a device that mixes chemicals and maintains a water bath at a constant temperature. It resembles a *sous vide* cooking device, but is better made, more suited for photography, and costs about the same. Now all I need to do is get out and take more pictures.

Not much on the ham radio front except for a few FT8 contacts. Anyone interested in a 75 meter sked?

The ARRL has a new benefit for members. The journals *QEX* and *NCJ* are now available online or in the ARRL Magazines app for tablets (or phones, but reading them on that tiny screen is a pain). With *QST* and *On the Air* that makes for four journals available with membership. Members can get either *QST* or *On the Air* mailed to them and paid hardcopy subscriptions to *QEX* and *NCJ* are still available. You get used to reading them online and you can print as many articles as you wish. You can also click on hyperlinks to take you to supplementary material.

A final note: submissions to the *Ground Wave* are always welcome, but *please* type them in a Word document (no matter how short) and send them as an attachment. Cutting and pasting from email texts does not work and I basically end up re-typing everything.

Club Volunteers			
Position	Name	Call	Phone
President	Don Kelly	WA6ZMT	651.276.4838
Vice President	Dale Maroushek	NØPEY	651.777.5309
Treasurer	Allan Klein	WØNLY	612.720.1324
Secretary	George Power	KØGCP	651.222.1031
Past President	John Faughn	KDØCAC	651.402.6482
Board of Director	Benjamin Otto	KEØRFZ	651.587.3138
Board of Director	Robert Walsh	WCØJ	612.201.0818
Ground Wave Editor	Jeff Iverson	WB9DAN	763.300.9547



St. Paul Radio Club, Inc.
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ADDRESS CORRECTION REQUESTED

SPRC Calendar

- Fri May 1 6PM SPRC Virtual Board meeting, see Page 1.
 Fri May 1 7PM SPRC Virtual Membership meeting followed by program. See Page 1.
 Sat May 16 9AM SPRC Zoom Breakfast? At last, coffee just the way you like it. Bring your own bacon. Look for email from Dale.
 Sat June 6 VE exam (if held) will now be at:
 St. Paul Public Library
 Highland Park Branch
 1974 Ford Parkway
- Sat Jun 20 9AM SPRC Zoom Breakfast again? Remember when other people made coffee for you? Remember when you could buy bacon? *
- Sat-Sun Jun 27 Field Day weekend – social distancing version?

* Let's hope it doesn't come to this.