

 <p>www.arrl.org</p>		<p>St. Paul Radio Club</p> <p>Ground Wave</p> <p><i>Jeff Iverson, WB9DAN, Editor</i> <i>Dale Maroushek, NØPEY, Publisher</i></p>	<p>KØAGF</p> <p>www.stpaulradioclub.org</p> <p>Club Repeaters: 145.310 MHz, 442.450 MHz 114.8 kHz tone PO Box 9375 North St. Paul, MN 55109</p>
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NEWS AND NOTES FOR JANUARY 2021 – Volume 81, Issue 1

NEXT (ON-LINE) MEETING: FRIDAY JANUARY 8, 2021

- 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
- (Zoom details are at the end of the newsletter)

Program

Our December program will feature Tim Burd, WD9IGX. Tim has been a ham radio operator in Wisconsin and Minnesota for many years. You can find him on 2 meter simplex, and HF sideband and CW. He's an Electrical Engineer with an interest in new technology, and an appreciation of old technology. He's here today with a presentation to help us keep our old tube type equipment up and running.

New Procedures for the Friendly Net in Effect – Dale Maroushek

After a suggestion from Dave, K0DOM, a survey was taken of our usual group, and the results were in favor of moving the start time to 1930 hours. This will mainly keep our net from overlapping the VHF Two Meter net that starts at 2030.

This will eliminate the former “pre-net check in” that formerly started at 1950. We will begin the net with check-ins at 1930, followed by the currently very short announcement phase, then another call for new check-ins. Once the new check-ins cease, we will return to the top of the list for another go around of chat. Lastly, a call will be put out for new check-ins or rechecks.

The Friendly Net can be found on Wednesday nights, 1930 (7:30 p.m. local), Ten Meter band on 28.310 MHz. (Note that this frequency is open to all hams, including Novice and Technicians – Ed.). It is a very loosely structured net without the formalities found on strict nets. It was designed and continues to be an avenue for new hams to get on the HF bands without the fear of making mistakes as they learn.

From the President – Lou Michaels WD8NOV



Wishing all of you a Happy New Year 2021. I look forward to the coming time when we as members of the SPRC will be able to get together again after our in-person meetings were put on hold because of the Covid-19. I want to thank Don Kelly for the great job hosting our zoom meetings and thank the members of the SPRC. You are all great. Let's have a great 2021."73"

Dale's Details by Dale Maroushek NØPEY

Happy New Year, fingers crossed that it is better than 2020. I'm sure the "I lived through 2020" shirts are out there already.

So the VFW newsletter offered this link to check out about using Zoom, especially if you are new to it. <https://support.zoom.us/hc/en-us/articles/201362193>. It's worth a look to see if it makes our meeting smoother for you.

So how was your Christmas? We went to Kirk's to pass presents to the grandkids, and chatted with the other two and my sister. Deb and I enjoyed a rib roast, lobster, and scallops, and some "air fried" foods to test the new machine. That is, on different days, not all at once.

We took advantage of Comcast's offer for new iPhone SE 2020, and got around to doing the transfer from Android to Apple the other night. Activation and number transfer went well with no problems. The content transfer went fairly well for Deb, but I'm sitting here now on hold with Verizon to see what "incomplete download" is hung up on mine. Well, they tried to help until the line dropped out. So, after a couple tries with the help of Youtube, I went to Best Buy. I explained the situation, and the young lady dove into the problem. Fingers flying and explaining to me as I asked questions, she completed the task in less than an hour! Now, I have to personalize it and get all my apps back to iOS. I'll be a two-phone guy for a while yet.

Watch for the new announcement concerning the Friendly Net, in this issue. Additionally, we still could use some alternate net control ops for both nets.

Time to start another massive shack redo. Joe, W0SU, has been telling us about his rebuild from scratch this year, and of course, it's still not just the way he wants it. Too much coming into the shack and not enough going out. The place needs new floor covering. It has carpet now, with much of it covered with plastic and wood so the chairs roll. My bright idea is to take up the carpet and put down real flooring. BUT, that would mean emptying the shack! Where would the stuff go during installation? Guess I should listen to my own preaching, get rid of the stuff before it's left to the widow and kids.

I plan to eliminate about half the Club jobs I currently do. That means others will have to step up to fill the need, or they will go unattended. This month we will concentrate on

finding a new “real” program coordinator. I arranged the first five for this season, only four left. Who is out there with a knack to get presenters to sign up?

Best and Worst in Class – Pete Guldán KDØSQJ

The results from 2020 Field Day are on page 69 of the December QST. The tally from those in the 3A groups from Minnesota place us in 4th place out of 4 entries in that category. But as Paul Harvey would say, stand by for the rest of the story. Before that I will insert this commercial message for 2021 Field Day on the weekend of June 26-27 when we have again been invited by the Benson's airport to use their facility for our activities. So did we really score last place of all the clubs in our grouping? Well the answer is really both yes and no at the same time, it just depends how you look at the numbers. The individual station scores would place us in last place, but I know a bunch of you who would have made contacts on location used your home stations instead. When you combine the scores for all the stations affiliating with our clubs the combined aggregated score is 5245 points which would well exceed the other Minnesota clubs in our category and class. So if you want you can say we got first and last place at the same time. The one thing we did excel at is the number of members who participated. Between the people on location and those using their own stations or just stopping by on Zoom, we just had a better showing by a huge margin than the rest. Considering the social distancing in place I will say we did better than I expected thanks to all of you who helped.

From the workbench of the VP – Kevin Welna, W5LNA

Winter is here well almost and it is time to heat up the soldering iron and build a project or two. Here is my completed first project. It is a bench top power supply. It was made from an old computer desk top power supply and has 4 different voltage outputs. The enclosure was designed by me and printed on an Ender 3 Pro using PLA+ filament



I tell you this because reading Jay's column in last month's Groundwave, got me thinking about getting some kind of club project going for this winter/spring. What kind

of project should/could we do? How would we collaborate? What might be of interest to members? What level of knowledge and/or experience should we target/appeal to? What would be a reasonable cost that might fit into most people's budget? That being the case, the project would need four main attributes:

1. It must be straight forward and not too expensive.
2. It should be useful and hopefully lead to bigger and better future projects.
3. It needs to incorporate some of the necessary skills and creativity that is the hallmark of the Ham Radio hobby.
4. It should be fun to make and go together easily and quickly.

Well, about 2 months ago, a new book on the ARRL website caught my eye, "Micro Controller Projects for Amateur Radio", by Jack Purdum. I have a couple of Mr. Purdum's other books and have liked them, so I purchased the book.

One of the first projects is a benchtop power supply with 3 fixed output voltages (3.3V, 5.0V, 12.0V) and one variable output (0 – 36V) with each able to deliver 5+ amps. Plus, the individual supply voltages can also be used at the same time. The beauty of this project is the use of a used\discarded desk top computer power supply. So, with a little creativity, you can build the entire project for as little as \$20 and easily keep it under \$40. Mine came in at just under \$40 including the 3D printed enclosure.

OK let's see where we are at:

1. Construction of the project mostly consists of soldering wires to solder tabs on panel jacks and fuse holders. (Even my tired eyes can do this with only a pair of cheaters.)
2. There are no mind-bending mathematical calculations required.
3. It can be built for under \$40.
4. The simplicity and usefulness of this project\tool will lend itself well to beginning and aspiring home brewers and tinkerers.
5. It delivers some of the most common voltages used in Ham Radio at current levels necessary for some lower power experimentation.
6. These voltages are the same ones used by both Raspberry Pi and Arduino Microcontrollers. (Future projects?)
7. We get to melt a little bit of solder.
8. We get to reuse components from some other unused\discarded device to create a new device.
9. We get to "scrounge" for parts!
10. We get to smell solder smoke!

It seems that this might be a good fit for a first club project.

If we were to meet 1-2 times a month via Zoom. I believe that everyone that attends should be able to complete this project by the middle to end of February. (This includes waiting for parts to come via slow boat from China!) By then, maybe we will have a second project in mind to carry us through to warmer weather?

If there is sufficient interest, I will put together a BOM (Bill Of Materials) and set up a Zoom meeting so we all can meet.

I could even be persuaded to print off enclosures for each builder. (For the price of the plastic.)

Anyone interested?

Contact me (kwelna@gmail.com) and let us see if we can get the ball rolling.

Building Blocks by Jay Maher NJØM

One - just one - of the categories of hazardous and semi-hazardous wastes I have collected in my basement would be batteries of various capacities and chemistries. Included in the mix are about a dozen 12 V sealed lead acid batteries from about 5Ah to 100Ah capacity. Few of these were new when I acquired them and I've never tried to determine their useful capacity. Though they've always worked when needed, I've always brought a larger than required battery to be sure. Since the 100Ah batteries weigh about 75 pounds apiece, it would be nice to optimize and carry just what is needed. I'm also getting into lithium-ion battery packs and would like to characterize some of those.

I do have an old Powerstat variable load available but have always thought a DC electronic load would be handy to have. When one of the surplus vendors (www.mpja.com) had their DC Load – Battery Tester on sale, I decided to give it a try. It is packaged in the standard China panel mount module (79mm x 43mm) with a push-button encoder to control parameters and another push-button to turn the load on and off. It will handle a load anywhere from 1.5-25.00 VDC and a current from 0.00-5.00A (0.01A resolution) though the load power is 35W max. Since that load limit is lower than what I'd like to test some of the larger batteries with, I decided to test a module to see if it could actually handle 35 watts continuous without going over temp (some cheap electronic loads seem to have overly enthusiastic wattage claims). I was pleasantly surprised that this module happily ran at 35.1W for about 30 minutes without any issues (default Over Power Protection is set at 35.5W). A few of these units in parallel should handle most of my testing needs for now.

Speaking of batteries, the New Year could be a handy reminder time to check batteries in your equipment (multi-meters, antenna analyzers, etc.). Don't get caught with batteries that lost their charge, or worse, have leaked and corroded inside your equipment.

Those Old Books by Scott Holisky NØAR

One of the most under-appreciated buys at swapfests are older "how to " publications. You might pass up on a 20-year-old ARRL Handbook figuring there is nothing of current value to be had. Yes, perhaps a lot of the construction projects might be a bit dated in a book of that age, but there are lots of things that haven't changed much. Ohms law is still the same and most basic technical information is still current. If you've never soldered on a PL-259 you can find that and more instructions in just about any Handbook.

I've seen ads selling easy to build antennas that sell for much more than it would cost to buy not only the materials but the soldering equipment to build on yourself. Then the next one you build would be even less of an overall expense. You don't need to rush into purchasing a crimping tool or the latest low loss coax to make something that will get you on the air.

So lets just say you're a new Tech License holder and have the desire to join in the weekly St. Paul Radio Club "Friendly Net" that meets Wednesday night at 7:30 PM on 28.310 MHz. It's a voice net and Techs are licensed to operate there. Everyone is on USB (upper sideband) and the preferred antenna polarization is vertical.

You build a dipole antenna just like the handbook shows, hook it up to your coax. Hoist the wire up in your backyard tree and just like that your set to get on the air! You might ask about adjusting the antenna length. Well, if you followed the instructions you probably are close enough that it works fine. Fine tuning can be left until the mosquitoes are out! Don't forget this is a wonderful time of year to install antennas. You also get extra gain and satisfaction if it's cold.

I've left out recommending you browse over to YouTube. While it may be fun to watch how others build, there are lots of videos that should be labeled "how not to do...". So stick with the handbook. If you find there are questions don't hesitate for a moment to ask a club member for advice.

December 4, 2020 Board Minutes

President Lou called the Zoom meeting to order at 6:07 PM.

A quorum was present: President Lou Michaels (WD8NOV), Vice President Kevin Welna (W5LNA), Past President Don Kelly (WA6ZMT), Board Members-at-Large Ben Otto (KEØRFZ) and Bob Walsh (WCØJ). Treasurer Allan Klein (WØNLY) joined during the meeting.

Also attending were Jay Bellows (KØQB) Jeff Iverson (WB9DAN), Dale Maroushek (NØPEY), Jay Maher (NJØM), John Crabtree (KCØG), and Leon Dill (WØCOE). Other members arrived during the board meeting.

The club currently has no Secretary. Don Kelly volunteered to take minutes.

The minutes of the November meeting were approved (Motion Kevin, 2nd Ben, Unanimous).

REPORTS PRESENTED

Vice President – Kevin has checked with STEM schools and makers groups and no one is committing to anything during the pandemic. He'll continue to follow up.

Ben submitted a current inventory of club property held by members.

Bob says that storage at the brother house is getting full—please don't bring more stuff. Five brother house residents (including Bob) got coronavirus—all are doing OK. Nothing has changed with the CDH ham club.

Dale says the paid membership is 73, probably will be around 125.

Allan joined and reported that our finances are in order. General \$7,538; Repeater \$852; Education \$1,257.

There was nothing new to report regarding the repeaters.

OLD BUSINESS

Auction: Options are only on-line at this time, and the on-line platforms appear cost prohibitive. The cheapest is 10% of sales plus other fees; another starts at a cost of \$2,000. We could do our own thing on-line with a few items at a time. We'll discuss it again next month.

Secretary: Lou's wife, Tamara S Michaels, has volunteered to serve as secretary. (Motion Don, 2nd Kevin, Unanimous).

(Don announced that the Zoom meeting is being recorded in the cloud as a member asked that it be available. It will be available to any member, but they will be asked to identify themselves to gain access.)

Website: Jay has talked with Tom Bredemus (KCØINP) about the club's website—he is working on it using the WordPress approach.

Maker group interest in licensing classes? As Kevin reported, he'll continue to follow up.

NEW BUSINESS

Erv Grossman tower, antennas: After discussion, it was agreed to send Arlis Grossman the list of the original donations acknowledging its relation to the original letter, adding a list of the antenna items taken in October.

ID card: Lou thinks it would be of value to members. Don suggested an ID badge on a lanyard. Comments were made that cards aren't necessary. Alan suggested something permanent that doesn't need to be reissued each year. The discussion will be continued via email.

Ground Wave mailing: The mail option will be eliminated. (Motion Don, 2nd Kevin, Unanimous).

Bench power supply project: Kevin said that he would put together documentation of a project to repurpose PC tower power supplies as a potential club-wide project. Another project might be a shack clock.

Leon Dill (WØCOE) reported that upcoming VE sessions have been canceled due to COVID.

Meeting was adjourned at 7:15 p.m. (Motion Don, 2nd Ben)

December 4, 2020 Meeting Minutes

Our meeting was held via Zoom with 32 attending.

After the ragchew from 7:15-7:30, President Lou Michaels (WD8NOV) called the meeting to order at 7:34 p.m.

The November 6, 2020, minutes were approved as emailed (Motion Ralph Bierbaum (NØAWN), 2nd Pete Guldán (KØCBH), Unanimous).

John Crabtree (KCØG) asked where officer contact information was available. It was agreed to share that information in the next Ground Wave. There was also discussion about making sure that the correct information was on the website.

There was no other business.

The meeting adjourned at 7:43 p.m.

Randy Gawtry (KØCBH) shared a presentation about audio and acoustics in amateur radio.

Editor's Notes – by Jeff Iverson, WB9DAN

Contributions to the *Ground Wave* are always welcome. Send them in a Word document (.docx) or Open Office document (.odt) as an email attachment to jaiverson@juno.com. Deadline is one week before the next meeting.

Officer Contact Information

President	Michaels, Lou WD8NOV	louthephotoguy@gmail.com	612-638-8159
Vice President	Welna, Kevin W5LNA	kwelna@gmail.com	651-354-5515
Past President	Kelly, Don WA6ZMT	dk@donkelly.biz	651-276-4838
Treasurer	Klein, Allan WØNLY	allankmn@cs.com	612-720-1324
Secretary	Michaels, Tamara	tamarasmichaels@yahoo.com	763-250-8333
Member At-Large	Otto, Ben KEØRFZ	ke0rfz@gmail.com	651-352-9590
Member At-Large	Walsh, Bob WCØJ	Brw.fsc@gmail.com	612-201-0818

Zoom Information

Until further notice, our monthly meetings in the new SPRC year will be in Zoom. Simply click the link below or call in from any phone. If you're not familiar with Zoom and would like to arrange to practice, text Don at 651 276-4838 or email dk@donkelly.biz.

SPRC is inviting you to a scheduled Zoom meeting.

Topic: SPRC Monthly Meeting

Time: First Friday, 7:30 PM Central Time (US and Canada)

You may join at 7:00 for the half-hour "ragchew," or at 6:00 to sit in on the SPRC Board meeting.

Click to Join Zoom Meeting

<https://us02web.zoom.us/j/83683855241?pwd=Zi9tR2FVanlsVEFoTENCZlI0WTJWZz09>

Or, using any telephone, dial 312 626-6799

Meeting ID: 836 8385 5241

Passcode: 651842

One tap mobile

+13126266799,,83683855241#,,,,,0#,,651842# US (Chicago)

+16465588656,,83683855241#,,,,,0#,,651842# US (New York)

If you use a calendar, download and import the following iCalendar (.ics) files.

Monthly: <https://us02web.zoom.us/meeting/tZcrf->

[ggqz4oHtVwLbEZHWPwR3LQGBE6qJXL/ics?icsToken=98tyKuGrqDMpEtGQsh2GRpwqBlqgb_zwmCVBgrdrizPnJhp7VRPhBLFuA5VdNY7B](https://us02web.zoom.us/j/83683855241?pwd=Zi9tR2FVanlsVEFoTENCZlI0WTJWZz09)

SPRC Calendar

Mon	Jan 4	Erwin Schrodinger may or may not have died on this day in 1961
Fri	Jan 8	6PM Virtual SPRC Board meeting.
Fri	Jan 8	7PM Virtual SPRC Membership meeting (7-7:30 ragchew, 7:30 meeting).
Thur	Feb 4	On this day in 1957, the USS Nautilus log reaches 60,000 nautical miles, matching Jules Verne's fictional Nautilus
Fri	Feb 5	6PM Virtual SPRC Board meeting.
Fri	Feb 5	7PM Virtual SPRC Membership meeting(7-7:30 ragchew, 7:30 meeting).
Sat	Feb 6	No VE sessions until further notice. Contact Leon Dill, WØCOE@arrl.net or 651-425-0338.