

 <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>
---	---	---	---

NEWS AND NOTES FOR NOVEMBER 2021 – Volume 81, Issue 11

NEXT MEETING: FRIDAY NOVEMBER 5, 2021

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

Program

The November meeting will be a hybrid meeting. That means there will be an in-person meeting at Cretin-Durham Hall (CDH) and a meeting on Zoom for those unable to attend in person. Zoom details are at the end of the newsletter.

Parking on the east (Hamline) side of the campus should be available, but it is unknown if the doors will be open. Your best bet may still be to park on the west (Albert) side and enter through door 24. Go straight down the hall to the commons at the end on your right. A recorded message at 651-842-1015 on Friday will confirm this.

The speaker/topic is not confirmed at press time, but join us in-person or on Zoom for fellowship.

Action discussion at the Board meeting.

The Board and Auction Chair Dale, NØPEY, will be having an in-depth discussion about the procedures we will need to change for this year's event. If you would like to participate, please join us at 1800 hours on zoom or in person at CDH.

Program Suggestions

An important part of our member meetings, be they on-line or in-person, is our programs. The board plans the programs and we would like your suggestions of what you would like to see. If you would like to present a program, that's a great idea, too! Please send your suggestions, including potential presenters' contact information if appropriate, to dk@donkelly.biz (or WA6ZMT@arrl.net, if that's easier to remember).

From President Lou Michaels WD8NOV

Just returned from 10 days at Mayo Clinic and spent most of September in the medical tent elsewhere as well. Hopefully things will run smoothly for November as we bracket Thanksgiving with Tamar's birthday, my birthday and our anniversary. Talk about a big turkey time!

Thank you goes out to Kevin W5LNA for taking care of business the past two months. I should be back for the Nov. 5th meeting.

Dale's Details by Dale Maroushek NØPEY

I find myself writing about this situation on a recurring basis. That being: Hams all die and leave a mess behind for others to clean up. From what I've experienced, that's mostly the widow, and maybe non-ham sons and daughters. Most of them know nothing about what we have, how much it is worth or where to get rid of it, either for cash or junk. Sometime towers or extensive outdoor large wire antennas are involved, other times it's a few boxes of stuff and a rig or two.

So, I got a call on the 18th, Dad left us a bunch of old gear, (sent a picture of the stack by the garage) and the property sale closes Friday the 22nd, can you help get rid of it. Yes, we can, where is it? Out by Willmar, Sunberg, MN. I clear the car of my stuff, and head west on Tuesday morning. Got there at noon and sorted the stuff out leaving the audio gear and two very old partial boat anchors that I couldn't figure out. The dumpster was next to it, and I noticed more stuff they had already thrown into it. I did some digging and found some more goodies. Slowly loaded it into the Equinox, pretty much maxed out the space. Long day, got home at 1700.

I should take my own advice, as some of you that have seen my place will agree on. Way too much stuff in too many places. I did sell some stuff last spring and will again next spring. I could bring a bunch to the auction, but we have so many items in storage now, we would be selling all day.

The lesson we should be learning is to thin the inventory, or at least organize it better and label it. If you can, pass it on to Ham relatives and friends. Maybe one of the CDH students if you want to be really generous. Radio City is gone, the Consignment Center is gone, Ham Fests are coming back and the Auction will be huge this season. So, you have 3 months to prepare, spend them wisely.

Ramblings from the VP's Work Bench - Kevin Welna - W5LNA

On the recommendation of a friend (Steve – N0YQ), I purchased a Wolf River Coil HF Antenna. I purchased the complete kit with tripod (SB 1000 TIA - I will do a review on this antenna at a later date.) The unit is well built and quite robust. It comes with a 12" tripod. While the tripod is well made and VERY light, it is a bit "tippy", especially

when you extend the collapsible antenna to its maximum length and the Minnesota winds start to kick up a bit.

Since I have no plans to march up a mountain and I will mostly be using antenna at parks or campgrounds where I will operation less than 25' from my vehicle, weight and size became less of an issue. I figured I could go to a more stable (and of course heavier system for my antenna. But I still wanted it to be as light as possible. What to use...what to use? Looking around my garage I came upon a slightly used surveyors tripod that I use for my chrono graph. Hmmm. It was light and would fit in most any trunk. Its super stable.....Enter the Aluminum Surveyors tripod! Back to the house and my computer on to Amazon and in 2 days + \$50 I had a new tripod. Now all I had to do was mount the antenna make up some ground wires attach them to the tripod/antenna and I would be ready to go.

First issue, with 9 - 30 foot ground wires, an antenna coil and a collapsible whip I needed a way to keep it all together and organized so set up would not take long and I would not have to untangle the ground lines with every use. I would need some added brackets or something to keep it all organized. Time to break out the 3D printer.

First, I needed to mount the antenna to the tripod but keep it insulated. Looking at the original tripod design, using a printed plastic plate should do the trick. Plus with a separate mounting plate there is a good possibility that the plate could be easily redesigned to fit other antennas and mounts. Mounting it to the tripod was accomplished by drilling and tapping holes where the existing bolts were located. A #7 drill bit and a 1/4-20 tap and I had a way to secure the top plate that could also be used for attaching the ground wires. I used stainless steel thumbscrews and washers from Amazon to hold the plate and ground wires. The plastic wings make them easy to remove in the field. I did need to cut them down about a 1/4" to get them to fully tighten up on the plate and ground wires.

Next, I needed a way to organize the ground wires, antenna coil and whip. Back to the 3D printer and a few trials and errors and I had that covered as well. A couple things to note here, the tabs that hold the wires can rotate for easier removal of the ground wires. I am using the leg extension locks (Turned upside down.) as the other wire holder. Please note that Steve (N0YQ) after using my original design came up with these changes. It is a better way to do all this and I have incorporated his changes into my original design. Since he is way smarter than I, I think it is only fair that I claim his changes as my own and there by take full credit for them. (Hi Hi)

I have added a few pictures of the set up for your consideration.



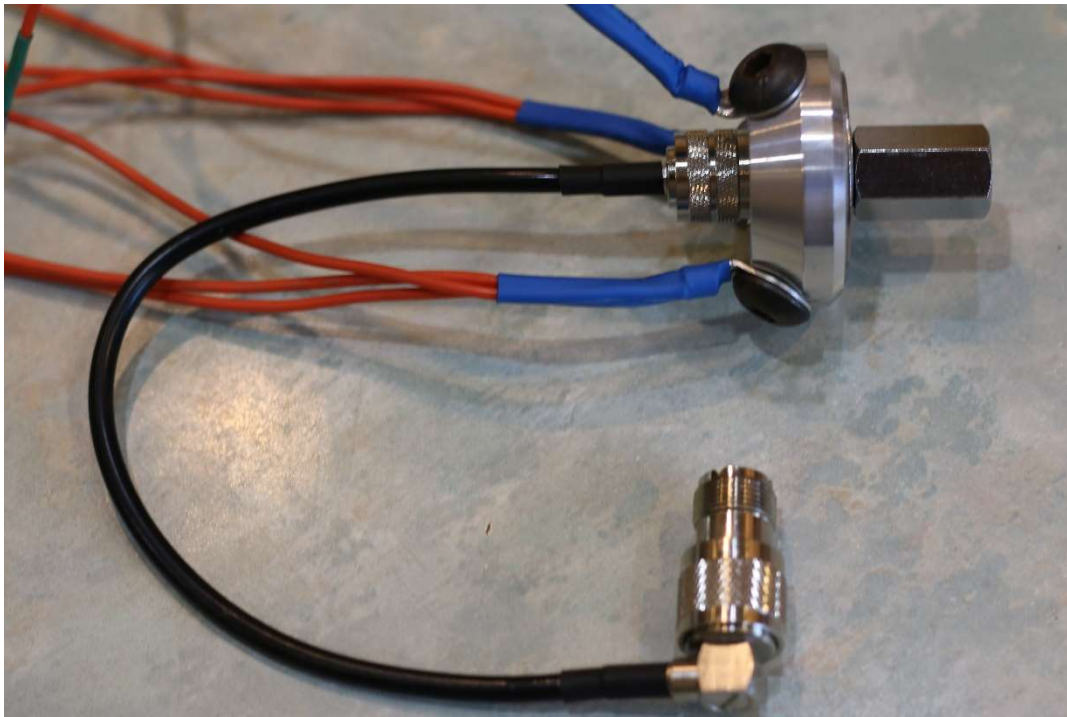
Mounting plate with thumb screws



Notice the insulating bushing on the plate.



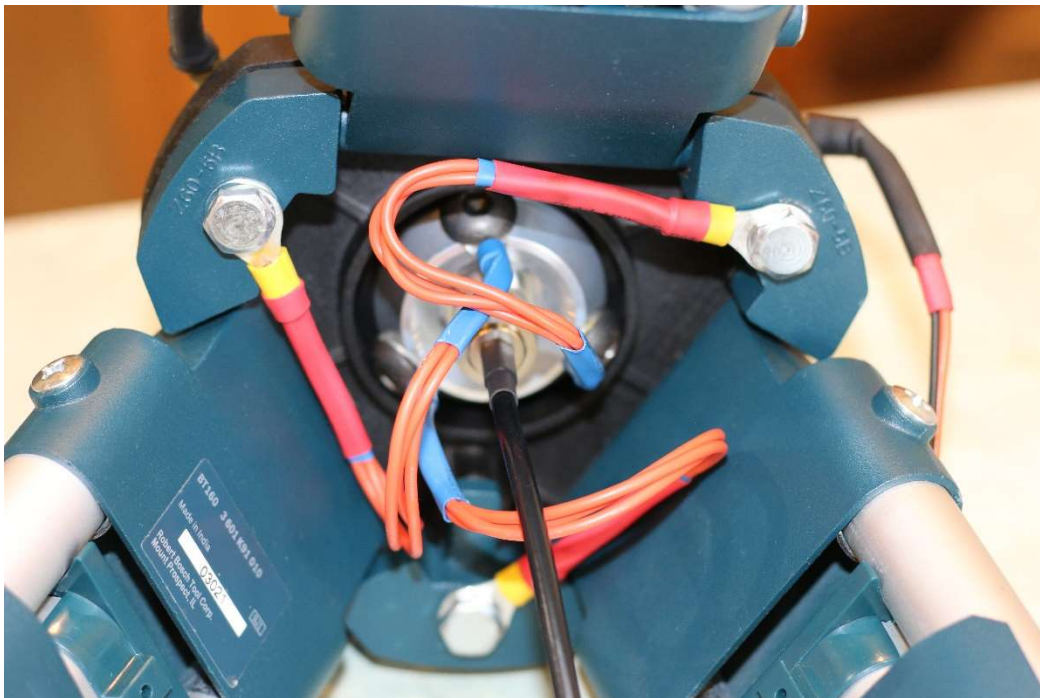
Ground wire holder with tape installed for extra friction. The tab rotates down for easier removal of ground wires. This clips to the legs but still allows for the legs to be extended.



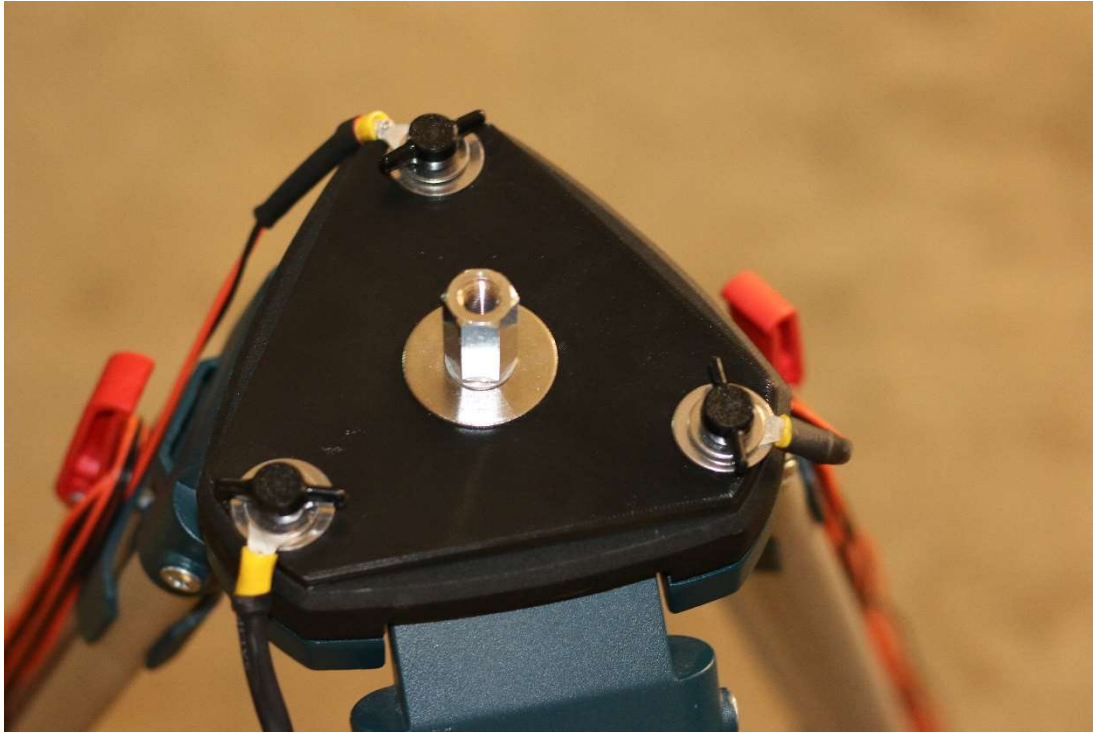
Original antenna mount with grounds and coax jumper attached



Top of tripod with holes drilled and tapped



Bottom of tripod with top plate attached notice the original base is used to route ground wires to the tripod and the use of heat shrink tubing for strain relief.



Top mounting plate installed with ground wires attached.



Original Tripod



Fully assembled. Notice the locking levers are now upside down and used for securing the ground wires

If you are interested, contact me and I will print you a set of parts to build your own. This set up is compact and light. It is quick and easily to set up. It is very solid, especially when you "Step" the tripod legs into the ground.

Performance has been excellent. I have used this set up at Hams in The Park/Field Day and have gotten QSOs from Slovenia, Germany and Sweden not to mention both the East and West coast as well as Texas, Florida and parts in between using 100 watts.

A few additional notes on the set up:

There is a smaller 12" surveyors tripod if you want something a bit more compact. Alas it is a bit more money, but the mounting is identical. My printed parts will work just fine. Just make sure it looks the same and you should be fine.

I used the existing base that came with the antenna as a way to attach the ground leads to the tripod.

Steve drilled out the holes for the mounting bolts and then through bolted the plate to the surveyor's tripod, I did not. I drilled a smaller hole down from the top and taped it so I could use wingnuts to secure my plate and ground wires. Both systems seem to work fine. His way you do not need to buy a tap and special drill bit.

I am not totally happy with the holding clips that secure the whip and the coil to the surveyor's tripod when traveling. They seem to loosen up over time. Maybe make them thicker?

Add a short piece of coax as a jumper to the antenna input as it is a pain in the butt trying to attach your main coax directly to the antenna.

Make sure you add some kind of strain relief to the ground wires where they attach to the tripod. Otherwise, you will be fixing them constantly! I used a couple layers of overlapping heat shrink tubing to stiffen up the joints.

The plastic (PLA+) used to make the ground wire holders, coil and whip is quite slippery. I rectified this with a piece of masking tape stuck to the inside of the clamps.

The clamps are tensioned to the tripod legs using O rings.

Links:

Wolf River Coil Antennas <https://www.wolfrivercoils.com>

Tripod <https://www.engineersupply.com/Bosch-Aluminum-Contractors-Tripod-BT160.aspx>

Coax jumper cable

https://www.amazon.com/gp/product/B07VMR2BDC/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1

October Board Meeting Minutes

Kevin: Called the in-person meeting to order at 6:10 pm.

Board members present:

Kevin Welna-W5LNA

Ben Otto-KEØRFZ

Allan Klein-WØNLY

Br. Bob Walsh-WCØJ

Art Thell-NØ0IWQ

Don Kelly-WA6ZMT

Excused: Lou Michaels, WD8NOV (Hospitalized)

Also present:

Dale Maroushek-NØPEY

John Crabtree-KCØG

Allan Klein: Treasurer's report:

General fund: \$7367

Education fund: \$1287 Repeater fund: \$882

He noted that this is renewal time and that we have just received about 25 checks that are not yet recorded and that the club is in good shape financially.

Don Kelly: No report

Dale Maroushek: Repeater is doing fine.

He noted that we now have approximately 50 members paid through 2022.

Br. Bob: CDH Activity Fair coming up on Wed., 10/6 at which he will have a Ham Radio table. This will contain a working 2-Meter rig operating from 11:30-12:40 am on the 146.850 repeater that attendees can monitor. Local hams are encouraged to participate in generating traffic. There will also be YouTube videos playing. Handouts will be available featuring different aspects of the hobby along with a sign-up sheet followed by an organizational meeting.

Jay Bellows has left off a set of by-laws for the CDH Club.

Don K. noted that if there is a MOA (Memo of Understanding) between the CDH Club and SPRC, the Board should review it.

Allan noted that ARRL may have handouts available for CDH.

Old business:

Board approved May 2021 Minutes. Moved by Allan, seconded by Don.

Kevin noted that Field Day food was good but we still need a beverage chairman.

New business:

December Party: Calendar date December 3. Possibly pot luck.

Kevin will contact Jay regarding further details.

Auction:

Date: January 21, 2022 for setup, January 22, for the auction.

Various options were discussed including 3-tiers which would be:

Active auction

Silent auction

Free stuff

Mention was made for the need to push things along—create some energy.

Statement was made proposing a dry-run on the software at the January meeting.

Don noted that one option would be to have a virtual auction over time.

Dale noted that that would require a lot of prep work. He stated that he will write up suggestions for the auction.

Allan noted that he would assist in gathering early information to post on previews with the Ground Wave, SPRC Website, and possibly another FB site.

Officers: November election coming up.

Don and Br. Bob will create a certificate honoring the Erwin Grossman equipment donation to the CDH Club that can be placed in the shack.

6:58: Adjourn Moved by Don Second by Art

October Membership Meeting Minutes

Kevin: Called the meeting to order at 7:35 pm.

Members present: 8-in person, 18 on virtual plus one new member and the presenter, Tim Duffy, K3LR of DX Engineering.

Kevin: Covered items from the Board Meeting including the CDH Club activity day 10/6.

Gave the Treasurer's Report as of today:

General Account	\$7,367
Repeater Account	\$ 882
Education Fund	\$1,287

Noted the Auction date of 1/21 (prep) and 1/22 as the physical auction. Also noted that the profits are dedicated to the ARRL Spectrum Defense Fund.

Stated that the CDH Club is coming along well and showed views of the antenna system.

Br. Bob: Stated that the club station is coming along nicely. Thanks to club members' efforts, it is on the air. Still needs tables and ventilation. He noted that the CDH Activity Day will include a live monitor of activity on the 2-meter band. This will be a live 2-Meter rig monitoring activity from 11:30-12:40 am on the 146.850 repeater.

Local hams are encouraged to participate in generating traffic. There will also be YouTube videos playing. Handouts will be available featuring different aspects of the hobby along with a sign-up sheet followed by an organizational meeting.

Dale: Suggested offering student members a free SPRC membership.

Kevin: Mentioned the “Pixie” Transceiver build program that is available. Mention was also made regarding equipment such as soldering equipment.

Br. Bob: Mentioned that equipment may be available in the STEM Program.

Tim Duffy, K3LR of DX Engineering: Gave an insightful overview of the basic types of antennas and their pros and cons including some tips on what actually works and what doesn’t. He also referred to the ARRL Antenna Book and answered questions from the audience.

8:15: Adjourn. Moved by Art Second by Don.

Radioactive? By Pete Guldán KDØSQJ

With the constraints on my time, not to mention some of my other hobbies I don't always devote as much time on our radio hobby as I would like. I find I sometimes need an activity or event to get me motivated. Maybe that's why I'm such a fan of Field Day. When I'm tuning around the bands with the big knob I often hear the contest stations and try to make a QSO. My modest 100 watt rig driving an end-fed wire sometimes makes the “Q.” Some of the really good operators will work with me and dig my signal out of the muck. More often though they are just trying to rack up as many points as they can in the shortest amount of time and only call out the stronger stations.

If I keep turning the big knob I sometimes will hear a special event station. They will usually be using one of the special 1x1 call signs. These are the stations that I most like to work. The operators seem to be more willing to work with you and get you in their log even if band conditions are less than ideal. Some of them have nice QSL cards or special certificates you can send in for. I have participated on both sides of these and would encourage you to do the same. Listen for me and some of the other folks operating W4P on the December 4th weekend mostly Saturday afternoon 12-4PM.

Any licensed amateur may request to use one of the 750 special 1x1 calls. It doesn't matter if you are a Tech or Extra as long as you stay inside your band privileges. FCC rules say they are for an event of special significance. They don't say significant to who

so I guess you could be creative if you want. Mine just happens to be the 21st amendment QSO party. Here's a link for some more info. <http://www.arrl.org/special-event-call-signs> I hope to hear you on the air on both sides of the pileup. 73.

Water and Coax Connectors – by Scott N0AR

The poor guy just asked a simple question to the newsgroup “what’s the best way to waterproof a connector?”. Then the mail server about blew up as it seems everyone on the group had at least two answers for the newbie. Almost a week later the replies are finally starting to dwindle down.

With the quest still on, I went to YouTube and did a search on the subject. You guessed it. There must be thousands of video on how to waterproof connections, wiring, etc... Like everything else there are a lot of good videos and a few that are just plain wrong. If you are looking for a place to start the folks at DX Engineering have a good basic video on how-to. No surprise they also sell a complete kit of everything you’ll need to do it their way or you could just head to the big box store and buy the tapes there.

When all is said and done the only thing that counts in making a good waterproof connection that can hold up for years comes down to the care and craftsmanship the person installing the material. Practice makes perfect. Going slow the first few times in the next best thing.

There are cheaper electrical tapes that would work fine for a Field Day weekends worth of waterproofing. These would be the box store bulk pack of vinyl tape for a few bucks. Then there are the more expensive ones that I reserve for long term use and usually live in their special containers. I like Scotch 33 or 88 but it’s just my choice. As for mastic tape, there are lots to choose from. I just like ones that don’t leave a residue behind when they are removed.

Here’s a couple of other things that seemed to be missing from the video I watched but are important.

1. The connectors should be properly installed, soldered or crimped and clean of any crud.
2. I always put a thin layer of dielectric grease on the connector threads and surfaces.
3. Once you are absolutely sure that the connector is mated correctly give it a bit of tightening with Pliers. We don’t want to mash the threads, just make sure it’s tight and not going to work itself apart.
4. Never “rip” electrical tape! Get a sharp knife or a scissors and cut it. Ripping causes distortion and the tape can let go.
5. Splices or connectors should never be allowed to float free without support. They are a weak spot and will fail.

I referenced “dielectric grease” let me direct you off to investigate this versatile stuff. Good for not only RF connectors but any that are going to be outside. Then there are the uses around the car and let’s not forget the boat trailer light bulbs. This grease is non-conductive and fills in the voids between surfaces in connectors that lead to corrosion. Try it, you’ll like it.

Editor’s Notes – by Jeff Iverson, WB9DAN

I would like to remind everyone about our St. Paul Radio Club Facebook page. We have over 100 members who are interested in what we are doing. Find the group and ask to join.

Remember, 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	Thell, Art NØIWQ	thellaj@comcast.net	651-457-5533
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

Simply click the link below (or copy and paste link into your browser if that doesn’t work) 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.

Since they are all the first Friday, I’ve just scheduled 8 meetings on the first Friday of the next 8 months. The link will be the same for all of them.

SPRC is inviting you to a scheduled Zoom meeting.

Topic: SPRC Monthly Meeting

Time: Oct 1, 2021 06:00 PM Central Time (US and Canada)

Every month on the First Fri, 8 occurrence(s)

Oct 1, 2021 06:00 PM

Nov 5, 2021 06:00 PM

Dec 3, 2021 06:00 PM

Jan 7, 2022 06:00 PM

Feb 4, 2022 06:00 PM

Mar 4, 2022 06:00 PM

Apr 1, 2022 06:00 PM

May 6, 2022 06:00 PM

Please download and import the following iCalendar (.ics) files to your calendar system.

Monthly: https://us02web.zoom.us/meeting/tZcoc-uqppjosHNYgigyhldJi19w4O3qkrK_G/ics?icsToken=98tyKuGr qz8oGNyUth-FRpwqGY-ga-rxiH5dgo1kmbxiGih6Zin_Z7tVZp0sAdPC

Join Zoom Meeting

<https://us02web.zoom.us/j/83542281662?pwd=QjhLNGhBZ2RuaUxrMWV4Z3laSWRLZz09>

Meeting ID: 835 4228 1662

Passcode: 440211

One tap mobile

+13462487799,,83542281662#,,,,*440211# US (Houston)

+12532158782,,83542281662#,,,,*440211# US (Tacoma)

Dial +1 312 626 6799 US (Chicago)

Meeting ID: 835 4228 1662

Passcode: 440211

Find your local number: <https://us02web.zoom.us/j/83542281662?pwd=QjhLNGhBZ2RuaUxrMWV4Z3laSWRLZz09>

SPRC Calendar

Fri Nov 5	6PM SPRC Board meeting, Commons Meeting Room, John R. Albers Center, Cretin-Derham Hall High School. *
Fri Nov 5	7PM Socializing followed by 7:30 PM SPRC Membership meeting. Commons Meeting Room, John R. Albers Center, Cretin-Derham Hall High School. See Page 1.
Sat Nov 6	10AM VE testing. Galilee Lutheran Church. 145 N McCarrons Blvd, Roseville, MN 55113. Reservations required. No walk-ins until further notice. Contact Leon Dill, WØCOE@arrl.net or 651-425-0338.
Sat Nov 20	9AM SPRC Breakfast. Denny's, 1664 University Ave, west of Snelling.
Fri Dec 3	6PM SPRC Board meeting, Commons Meeting Room, John R. Albers Center, Cretin-Derham Hall High School. *
Fri Dec 3	7PM Socializing followed by 7:30 PM SPRC Membership meeting - Or Holiday Party? Commons Meeting Room, John R. Albers Center, Cretin-Derham Hall High School.
Sat Dec 4	10AM VE testing. Galilee Lutheran Church. 145 N McCarrons Blvd, Roseville, MN 55113. Reservations required. No walk-ins until further notice. Contact Leon Dill, WØCOE@arrl.net or 651-425-0338.
Sat Dec 18	9AM SPRC Breakfast. Denny's, 1664 University Ave, west of Snelling.

* Depending on business to be considered, Board Meetings are sometimes held electronically. Check with a Board member beforehand to confirm a meeting.