



Signals from SARA



WØJH

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An ARRL Affiliate & Special Service Club
www.radioham.org

September
2021

September Meeting - RF Discussion

The monthly 2nd Saturday meeting of the Stillwater Amateur Radio Association is this Saturday in Auditorium A at The Gables at Boutwells Landing, 13575 58th Avenue Oak Park Heights MN 55082.

Boutwells Landing has advised us of COVID-19 protocols, which are as follows:

- 1: masks not required, but may be used at visitor's option
- 2: must enter at the Gables entrance and be screened at the reception desk
- 3: screening will involve having temperature checked, and registering with name, address & phone
- 4: no wandering about the facility, but go directly to Auditorium A

All pretty much as we have done in the past, except for the temperature check and registration, which is similar to what we all do when checking in for many appointments these days. Could be a slight bottleneck if a large number of people come in at the same time, but a small price to get back some segment of normality.

Good planning would suggest that we still have a Plan-B in the wings, but we should be OK at Boutwells, unless there is a major change from now to then. Plan B will be holding the meeting outdoors at Autumn Hills Park.

Announcements

The regular monthly meeting returns on September 11, 2021 in person and via Webex.

Meeting: Current Members will receive a meeting invitation via email from Joe, KCØOIO.

SARA's virtual monthly meetings are open to all. Go to

<https://stillwateramateurradioassociation.my.webex.com/meet/w0jh>

to join the meeting.

SARA On the Air

Phone Round Robin Ragchews & Net

(All Times are Local - Central)

> Daily "Lunch Room" Crew: 12:00 - ?

SARA 2m Repeater* ... Weekdays

> Daily Top Band Crew: 20:00; 1.966

MHz LSB or USB +/- QRM (alternates:

21.316 +/- MHz, 50.166 MHz)

> Monday 75m Crew: 08:15; 3.856 MHz

LSB +/- QRM

> Tuesday (TMT): 19:00; SARA 2m

Repeater*

> Wednesday Informal Net: 21:00;

SARA 2m Repeater*

> Sunday Digital Net: 19:00; 3.584.15

MHz USB (500-1000 Hz) on waterfall

(Mode announced via email)

Can't Find Us On the Air?

... Monitor SARA Repeater!

*SARA 2m Repeater: 147.060 MHz;

Positive Offset; DCS/DTCS 026

Normal)

We will test the ability to livestream the monthly meeting via the SARA Webex teleconference room at <https://stillwateramateurradioassociation.my.webex.com/meet/w0jh>. If we are successful, SARA will invest in sufficient audio & video equipment to provide the best possible experience for those who join us via the Webex option.

The program for this meeting will be a bit flexible. We will spend some time looking at the FCC requirement for documenting RF exposure at your operating location. We'll also have an open forum to hear from members as to what they have been up to the past eighteen months!

Both the Webex livestream and the RF Exposure discussion will be dependent upon meeting at Boutwells for internet access.

The September monthly meeting is on Saturday September 11th, via the SARA WEBEX teleconference room. **Our Saturday meeting format is changing starting with this meeting. The meeting program will now be presented at the start of the meeting at 9:00 AM. A brief business meeting will now follow the program.** The monthly meeting is open to members and visitors alike. The meeting room is available at this link:

<https://stillwateramateurradioassociation.my.webex.com/meet/w0jh>

The WEBEX room is open by 8:15 AM CDT (13:15 UTC) for "Morning Coffee" eyeball QSOs and the meeting begins at 9:00 AM CDT (14:00 UTC).

Bandwidth from the President

Greetings from my shack, de Joe KCØIO.

The summer seems to have gone by much too quickly! Why does it do that? Not enough time to really try out that IC-705.

SARA was busy this summer though. 2nd Saturday breakfasts at Perkins resumed in June. Outdoor Eyeball QSO Parties and Radios in the Park events have been well attended, even if we've been a bit "nomadic," moving from park to park – once on the same night! A successful in-person Field Day at the end of June. And the 7th White Rock Ghost Town/Tri-State Marker Special Event at the end of August was a great time, in spite of Mother Nature sending thunderstorms on Saturday and the Sun socking us with an "A" Index of 19!

Gremlins have gotten me this summer. I had RFI issues in the shack, my HFedz antenna was deaf, and the pine tree supporting the north end of my OXB Special has a broken branch that was putting strain on the antenna wire. Luckily, I was able to resolve all three, but not completely until this Labor Day weekend.



Troubleshooting the HFedz 160-10 end fed antenna was done at an August Radios in the Park evening. Step by step diagnosis was performed. The broken wire connection at the eye ring that was hiding inside the shrink tube finally showed itself, just as we were getting ready to check the antenna for resistance with a DMM. Field-expedient repair was made and the waterfall on the IC-705 lit up once again – whew, glad it wasn't the rig.

The RFI issue in the shack kept knocking the IC-7300 computer connection offline. An inspection of the 450-ohm ladder line at the balun, I found stress breaks in the stranded steel in a couple of places. I replaced a section of the ladder line. That helped with SWR, but not the RFI. Replacing the ~18 yr old W9INN balun with a Balun Designs 4:1 balun didn't hurt but didn't help either. Installing a Palomar Engineers RF kit complete with ferrites for all cable connections helped some, at least the computer monitor above the radio was no longer affected. I still could not run more than 20 – 30 watts without RF knocking out the IC-7300 connection. Finally, after trying all of the above plus a cord and wire rerouting at the station, I acquired a TrippLite USB cable with ferrites at both ends (and probably better shielding) recommended by Dick NØUC in an email reflector conversation about RFI at the WØEQO remote base. Bingo – the 6 ft cable is long enough to reach the computer directly. That also eliminated a USB hub connection inline for the radio. Up to full power on the 7300 without an issue. It's working well, proven by the VK6 and RT0 FT8 contacts on 30 meters this morning running 50 watts, both all-time new ones for me.

In the process of looking for the RF issues, I discovered that a branch high up in the Norway Pine backyard antenna support structure had broken recently. Hanging precariously over the neighbor's yard, the branch is resting supported by lower branches at the moment. A tree service has been contracted to prune the dead branches throughout the otherwise healthy tree this month. This dangling branch was pushing the antenna wire down. I had a choice – wait for the tree service to clean up the tree, or drop the antenna and reroute it in the tree. I chose the reroute, as it was going to have to be done anyways (still will) when they trim the tree. This is not an easy proposition because the tree sits between the aerial power drops for our house and the neighbor's house and you have to shoot from the alley behind the pole with all the power, cable, and phone lines as the power poles are on my side of the alley. It's a tricky shot to make, just ask WØOXB, he did it the first time.



After issues with my modified Hyperpet antenna launching device at White Rock, I came up with the idea of mounting not just the fishing reel to frame of the launcher as I had, why not the rod too? So that's what I did. I had used the old rod for antenna launches in the past, but that's a 2-person job. I found that the rod cradled quite nicely in the Hyperpet frame. Several tie wraps and a little sawing to shorten the rod end, and the HyperLaunch SuperPro Deluxe is here. And it works like a charm. Although I couldn't replicate Dave's shot – mainly because I want to keep the landing zone in my yard and not the neighbor's roof – I did get a shot over the tree just

below the top by standing in the neighbor's drive. A little creative thinking that involved a golf ball and mason line to get back up and over the aerial drops resulted in nearly the same routing of the antenna as before. I will have to do this again when the tree work is done, but I have the experience now.

The SARA monthly Saturday meeting season is upon us again. And for the 1st time since February 2020, we can return to in-person meetings in Auditorium A at Boutwells Landing. COVID protocols in place at Boutwells include:

- 1: masks not required, but may be used at visitor's option
- 2: must enter at the Gables entrance and be screened at the reception desk
- 3: screening will involve having temperature checked, and registering with name, address & phone
- 4: no wandering about the facility, but go directly to Auditorium-A

All pretty much as we have done in the past, except for the temperature check and registration, which is similar to what we all do when checking in for many appointments these days. Could be a slight bottleneck if a large number of people come in at the same time, but a small price to get back some segment of normality.

Good planning would suggest that we still have a Plan-B in the wings, but we should be OK at Boutwells, unless there is a major change from now to then. Plan B will be holding the meeting outdoors at Autumn Hills Park.

The program/presenter will now lead the meeting with the business session to follow. This month we will have a "What have you been up to" open forum for all to share what they've been up to radio-wise the past year and a half. We will also look at the FCC RF Exposure rules regarding documenting RF exposure at your station and an online tool from the ARRL that makes the task pretty easy.

Meetings will begin at 9:00 AM. The meetings are open to all members and visitors alike. We will test livestreaming of the meeting via the SARA Webex teleconference room is at <https://stillwateramateurradioassociation.my.webex.com/meet/w0jh>

I wish you all well. Stay Safe – Stay Healthy!

73 es CUL de KCØOIO

Membership Update

Shel Mann, NØDRX

Thanks to all who have demonstrated continued support of SARA, particularly over the past year under very difficult conditions. Maintaining membership AND your participation, is a definite sign of your support. As with any group, SARA is only as good as the members who chose to make it so, along with those who lead the group. We are fortunate to have many individuals with a wide variety of skills who lead and support various SARA functions.

In most cases the President is the lead person, whom I personally consider to be the “lightning rod”, that we all look toward to either blame or applaud whatever direction we feel an organization may be taking. While no individual is totally responsible for success or failure, Joe KCØOIO has done a fantastic job leading SARA through this transitional period when we have not been able to have traditional monthly in-person meetings. As we hope to resume those traditional monthly meetings, we also hope to continue many of the things that have proven useful during the Covid pandemic. Please read the weekly SARA Broadcast that Joe sends by email to keep current on SARA activities for the coming week.

We had a total of 119 members on 12/31/2020, and have 129 members as of 8/30/2021. While we aren't beating the drum yet for renewals for 2022, we do encourage renewing early. We currently have 25 members paid through 2022, 4 paid through 2023. and one paid all the way through 2027.

[New & renewal membership applications can be accessed online at the radioham.org website and clicking on “about” in the upper left box near the top of the page.](http://radioham.org) Upon completing and submitting the appropriate form, you can then either continue to pay online with your credit card, or send me a check made out to SARA for the appropriate dues. If paying online, there will be a \$1.25 convenience fee to cover our cost to PayPal, in addition to the appropriate dues. If paying by check, it is best if you note in the comment section on the application prior to submitting it, that you will be mailing a check. In either case, membership processing does not get completed until I can match up applications with the appropriate payment.

Please contact me with any questions regarding membership status, or applications.

73,

Shel NØDRX

trustee@radioham.org

2021 WØJH Tri-State Special Event

Dave, WØOXB



In thinking about our trek to this event, a quote from Charles Dickens comes to mind. "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair." (A Tale of Two Cities) Although it doesn't qualify as a city, there is a lot of similarity when comparing our times in White Rock, SD.

Friday, August 27

Most of us started off heading for White Rock in a downpour that morning. But by the time we got to Alexandria, MN the sun was out and things were good.

Except for a fraudulent \$151 charge on my Visa credit card, and subsequent issues with that bank account, things were improving. Farm fields and ditches along the way to Wheaton were soaked. Some corn was "as high as an elephant's eye," while other patches were barely knee high.

As most of us know, this midwest summer was best described as "hot, humid and without rain." Drought probably best describes it. But to my surprise, and at the warning of White Rock Mayor Rudy Rodriguez, it had rained in that Tri-state area since early August.

But how could this be, given the drought conditions we'd experienced! In mid-August, I asked Rudy to do his "anti-rain dance" and he said he would. Unfortunately, we learned later the mayor confused my instructions and ended up doing a "Mexican Rain Dance!" It appears the wave after wave of rainstorms was likely his doing.

Arriving on site around 12:30, we were ready to set up Base Camp by the old, huge cottonwood tree. A quickly(?) erected 191' long center-fed Zepp antenna ran mainly west to east and trailed off a bit to the NE. It was ~45' high, had ~60' of ladderline connected to a 4:1 MFJ/W9INN balun with coax running into the SARA trailer. Time was taken to discuss redesign work and retrofitting possibilities of OIO Joe's launcher. (Co-authored patent pending!)

The transceiver we started with was a Kenwood TS-590 and later switched to an Icom IC-7300. With the nice display on the 7300, we greatly improved our chances of finding and using clear spots on the bands. (Icom Quality!)

Some of us took a spin out to the Tri-state marker to see how conditions were out there. Heck, it was better than expected! We even stayed in 2-wheel drive the whole time. Our hopes for operating at the marker were soon to be realized.

Friday Dinner

Besides setting up and operating, GAF Bob barbecued hamburgers and ole-fashioned, skin-on wieners. A field-type dinner, with all the trimmings, really hit the spot.

I must acknowledge Bob's lovely XYL Connie for getting food and things prepared in advance for. And then the rains came again ... so did lightning.

Saturday Morning

Hoping the storm would miss us was wishful thinking; the TV wx radar was lit-up like the 4th of July. Rain, wind and more rain hit for almost 2 hours. Bob, Joe and Rudy (his legs still tired from Mexican Rain Dancing), held tightly to the support poles and guy ropes that held the trailer's tarp. The rain filled the sagging tarp almost as fast as they could redirect it away.

News Down the Road

Former White Rock Mayor and land baron VKB Randy left Woodbury early Saturday morning for the event. Just past Alexandria, in his restored '47 Chev, he ran into the storm and described it as "hitting a wall of water." He said, "It was raining so dang hard, I had to keep the hood ornament aimed at the white line on the shoulder of the road. And I couldn't even see it all the time because of the small windshield wiper blades."

Meanwhile, back at the Casino restaurant, Mary, Shel, Brian, Zack and I had a large, satisfying breakfast. Although we regretted the conditions at Base Camp, we knew there was nothing we could do until the rain stopped.

Wa-La; and the rain stopped around 10:30.

And with things slowly drying out and our spirits lifted, as did the storm, we started to operate! Numerous SARA member contacts were made that morning on 75m. And, Special TNX to Jim (WØELC) for serving as our Twin Cities SARA Member Relay

Station. Jim (Jimbo) relayed info of our frequency whereabouts to SARA members via the SARA repeater and text messaging. This greatly improved the chances of making contact with us.

And, a station at the Tri-state marker was now operational. Brian and Joe manned the station out there. They had some luck, mainly on 20m, but band conditions were not very good. The wx held a few more hours; but we knew what was coming so the marker station was taken down.

Sprinkles started around sunset. But again, rain didn't dampen our spirits or appetite ... pulled pork sandwiches and corn on the cob were really gobbled up. Heavy rain moved in a little later and there was also an electrical light show.

Discretion being a better part of valor, we were convinced we were done for the day!

Sunday

Waking to a gorgeous, sunny day was heart-warming.

About noon we decided to take a quick run out to the marker and set up that station one more time. Operating from the back of Brian's pick-up we had a mission. We learned SARA member Gary, WBØMOA needed North Dakota for his W.A.S. (Worked All States) award. Now this was a challenge, cuz as many of you know, the absorption this time of the year on the lower frequency bands is bad. Usually, you'd be lucky to make any contacts after mid-morning on 75m or 40m. We called and called Gary on 75m and 40m for almost 30 minutes.

We relayed to him by email/text messages where we were (yes, this is legal) but we heard nothing but band noise. Then, when we were about to give up ... we heard him!! Wa-La, Gary was there. We exchanged reports and the contact is official.

Around 3:00 we were all packed up and really about to leave. A customary, celebratory drink (beer or whatever) was in order and we were sad to leave Mayor Rudy and White Rock. With hugs, handshakes and dampness in some eyes (not due to any rain), it was time to say goodbye until the next time.

Mayor Rudy offered to work on his Mexican ANTI-rain dance before we meet for our 8th event at White Rock. Until then, we'll cherish our memories ... I sincerely think it was the best of times!

A BIG TNX to all attendees for making this a fun, successful event!

Bob, WØGAF
Joe, KCØOIO
Brian, NØBJE
Mary, NØDXH
Shel, NØDRX
Mayor Rudy
Randy, KDØVKB
Zack, AAØU
Dave, WØOXB

Notes:

Photos attached show some of the event as described.
TNX to Shel for those he provided.

Many more photos will be uploaded to Flickr and shared with you.
TNX to Keith for setting this up online.

There's some video posted on the SARA Facebook group
TNX to Joe.

If you're not already a member of the SARA closed Facebook group, look it up and join!
“SARA - Stillwater Amateur Radio Association”

2021 WØJH Tri-State Special Event (White Rock, SD; August 27, 28 & 29)*General Info & History:*

Members of the Stillwater Amateur Radio Association (SARA) set up and operated portable stations where the Dakotas meet Minnesota. One station was in White Rock, South Dakota, about one mile from the South Dakota, North Dakota and Minnesota junction. Another station was exactly at the tri-state marker (Roberts, SD, Richland, ND and Traverse, MN counties) at Grid Square EN15. Once a small but thriving town, White Rock is now nearly a ghost town. Rudy Rodriguez, the mayor and former ham, was on hand throughout the event.

We operated from the SARA trailer and screen tents, using generator and battery power. This marked the 7th time our club has operated from this location; previous events were held in 1999, 2000, 2002, 2012, 2015 and 2019. 2021 was probably the wettest and nastiest!

White Rock is ~14 miles east of Hankinson, ND and ~12 miles northwest of Wheaton, MN. A marker between farm fields recognizes the borders of South Dakota, North Dakota and Minnesota. Established in 1884, White Rock was a frontier community that prospered in the heart of a fertile grain growing area. In its heyday, it consisted of 7 grain elevators, 3 hotels, 4 saloons, 2 banks and a railroad depot. It had a large department store, several mercantile stores, 2 lumber yards, 2 drug stores, 2 churches and a 12-grade school system. The population once 600, is now only 2 residents.

Remote Base Station Update - September 2021

Patrick Tice, wa0tda@arrl.net



Stations WØEQO and WAØTDA are all up and running. WØZSW is offline for maintenance.

We haven't quite left the thunderstorm season behind us yet!

WØZSW and WAØTDA are taken offline periodically as a precaution against lightning damage, then returned to service when the dangerous storms have passed. You can check out the North

American lightning map in real time at:

https://www.blitzortung.org/en/live_lightning_maps.php?map=30

If you log in and find a station off the air, you might want to check out the lightning map to see if there could be a lightning shutdown in progress. Otherwise, you can always contact me at wa0tda@arrl.net and let me know there is a problem.

Station W0EQO operates at reduced power and some restrictions (half power & no 40 meter or data operation) due to a persistent problem with RF in the shack. Bill, N0CIC, and I have been working on this issue for weeks and have not been able thus far to mitigate the problem. We are planning to try replacing some of the cabling and experimenting with removing the LAN connection and replacing it with WIFI. We think the problem stems from RF getting into the laptop PC. Laptops are susceptible to RFI but there isn't room for a tower PC and separate monitor.

One of the limitations we have is the space available in the shack, which is a pump house. This has proven challenging as we try to make everything play nice together in a small space. On the plus side, the scout camp is not as busy now as during the summer camping season, so if we have to modify the internet system there is less chance of interfering with other camp operations.

Joe, KC0OIO, describes similar RF issues with his new IC-705 station that were solved with a replacement USB cable. We will give that a try. I suspect that we are dealing with more than one problem, though. When I think back on the years of running the old

Kenwood TS-40 station at W0EQO, there were times when the audio would go AWOL for no apparent reason while the rig control remained working. Sometimes the entire station would be inaccessible. It was hard to pin down the cause, but RF in the shack was a pretty good bet. The aggravating thing was that it would seemingly happen at random and then the station would run perfectly for weeks at a time.

I am confident that eventually we will crack this nut, so stay tuned!

Good luck & good DX in the remaining months of 2021 and have fun with the radios!
73 - Pat wa0tda@arrl.net

A Note from the Editors

This edition of the 2021 Signals from SARA news is produced on Google Docs. If you are placing graphical elements or text on top of or mixed in with photos, try to flatten that section of your document into a single large image instead of multiple small ones. If you don't know how to do this, don't worry - submit it anyway and we'll work it out.

Formats for submission of articles

- Google Docs format: Produce your article in Google Docs and when you want to submit it, just share it with wa0tda@gmail.com and it will be easy to add it to the newsletter template for the upcoming issue.
- Microsoft Word or compatible formats, with file extensions .doc, .docx, etc. Embedded pictures and graphics are okay (and preferred) in this format, but see the above caution.
- Text files, either plain text or rich text; .txt, .rtf, etc. **It's easy to just create your document and send it to wa0tda@gmail.com as an attachment if you like.**
- **If you have been using Dropbox to submit in the past, you may continue to do so.**

How to join SARA

A membership form can be found on the radioham.org website and can be mailed along with your check made out to SARA, to the preferred address of: SARA, 1618 Pine St W, Stillwater, MN 55082. Dues for regular membership is \$20 and associate membership is \$10. Having an amateur radio license is a requirement to be a regular member. You can also join, re-up, or change your membership information on Radioham.org:

<https://radioham.org/sara-membership-application-renewal-page/>

Please send any questions as well as updates to your membership or license status to:

Trustee@radioham.org

Upcoming events

- September Meeting: Saturday, September 11, 2021 - Virtual meeting via Webex & in person with restrictions at Boutwells.
- SARA Lunchroom - M - F Noon to ?
- "Sunday Fusion" SARA's digital voice hangout is every Sunday evening at 7:00 PM. "Sunday Fusion" makes use of the System Fusion C4FM digital voice capabilities of the SARA repeater along with WIRES-X and YSF connectivity, It is an informal "hangout" for those who want to explore the System Fusion capabilities of their radios.
- October Meeting: Saturday, October 9, 2021.
- Discussion continues anytime at <https://groups.io/g/StillwaterMNA AmateurRadioAssoc>

SARA 2021 Officers

Joe Heitzinger, KCØOIO - President

Bob Jensen, WØGAF - Vice President

Dave Iverson, N9JNQ - Secretary

Rich Smith, ADØSN - Treasurer

Zack Zaccagnini, AAØU - 2021 & 2022 Director

Doug Farrell, N9TOW - 2020 & 2021 Director

Note: The SARA Trustee officer is an appointed position; chosen by the elected officers

Trustee: Shel Mann, NØDRX