Gray Line Report

September 2020

6m EME Project

Field Day Reports

No Touch Radio

Member Profiles

... and more!

TCDXA
TWIN CITY DX ASSOCIATION
Minnesota

Newsletter of the Twin City DX Association

In this issue...

On the cover…

Ralph Pellegrini, N9BDR, on NØTB's EME tower. See story, page 3. Photo by Tim Blank, NØTB.

Gray Line Staff...
KØAD
WØJMP
KØJM
WAØMHJ
WØZF

TCDXA DX DONATION POLICY

The mission of TCDXA is to support DXing and major DXpeditions by providing funding. Annual contributions (dues) from members are the major source of funding.

A funding request from the organizers of a planned DXpedition should be directed to the DX Donation Manager, Mike Cizek, WØVTT. He and the TCDXA Board of Directors will judge how well the DXpedition plans meet key considerations (see below).

If the Board of Directors deems the DXpedition to be worthy of support, a recommended funding amount is presented to the membership for their vote. If approved, the TCDXA Treasurer will process the funding..

Key Considerations for a DXpedition Funding Request:

- DXpedition destination
- Website with logos of club sponsors
- Ranking on Most Wanted Survey
- QSLs with logos of club sponsors
- Most wanted ranking by TCDXA Members
- Online logs and pilot stations
- Logistics and transportation costs
- Up front cost to each operator
- Number of operators and their credentials
- Support by NCDXF & other clubs
- Number of stations on the air
- LoTW log submissions
- Bands, modes and duration of operation
- Previous operations by same group
- Equipment: antennas, radios, amps, etc.
- Valid license and DXCC approval
- Stateside and/or foreign QSL manager
- Donation address: USA and/or foreign

To join TCDXA, go to

http://tcdxa.org/

EME, the Ultimate DXing Challenge

Half Million-Mile-Long Path

By Danny Dantzler WØJMP Station of Tim Blank, NØTB

The moon has fascinated humans since the beginning of time. Religious ceremonies, planting and harvesting were all timed to the moon in ancient civilizations.

The use of the moon as a passive communications reflector was first proposed by W. J. Bray of the British Post Office in 1940. He calculated that with the available high power microwave transmitters and low noise receivers, it would be possible to reflect a radio signal off the moon and use it for a communications channel. This was the first proposed use of EME (earth-moon-earth) communications.

The first known detection of a radio signal bounced off the moon was made in Germany in 1943. The German military was using high-powered radar to detect enemy planes and ships when they noticed an unexpected reflection right at moon rise or set. So the first radio signal

EME array, drone view. Photos by Tim Blank, NØTB

bounced off the moon was discovered serendipitously.

According to Wikipedia, "The second successful reception of echoes off the moon was carried out at Ft Monmouth, NJ on January 10, 1946" It was part of "Project Diana" named for the Roman goddess Diana, which was an experiment performed by the US Army Signal Corp. It was an experiment in radar astronomy and was the inspiration for later EME communications. The Communications Moon Relay project followed and developed a teletype link between the Naval Station in Hawaii and Washington DC. In the days before communications satellites, a reliable communications link not dependent on ionospheric conditions was revolutionary. The development of communications satellites in the 1960s made this link obsolete. But amateurs were picking up the technique and in 1953, the first amateur radio moon bounce communications took place.

Tim Blank, NØTB installed a very impressive EME array at his home near Byron MN. The project took several years of design and preparation. The tower base was poured in August, 2019 (see photo) and the station went live in early August, 2020. The array is a masterpiece of design, fabrication and installation (see photos)

At its core are four InnovAntenna® 8 element loop fed yagis. (see photo) (https://

www.innovantennas.com/en/) Tim modified the booms on the antennas by adding internal tubing. Stronger boom-to-mast plates with integral truss masts were also fabricated. The supporting vertical tower is 24 feet of Rohn® 65 (24 feet above ground.) The cross boom is 30 feet of Rohn® 55. The tapered vertical components of the H-frame are 3.5 inch tubing with 3 inch tubing on the ends. All the support trusses are made from Phillystran® non-conducting guy rope to minimize interaction. The azimuth and elevation rotor controls are from Green Heron® (https://www.greenheronengineering.com/). The LNA (low noise amplifier) at the base of the tower is made by SSB Electronics (https://www.ssb.de/en/index?language=en). That is nearly all of the "off the shelf) commercial products used in the array. The rest is custom designed and fabricated. Why the LNA at the antenna base? Signals reflected from the moon are incredibly weak. The radio signal makes a roughly half million mile round trip to the moon and back and the moon only reflects about 6% of the signal. The path loss is on the order of 250 dB! So every tiny bit of signal enhancement and noise abatement is required. Tim even replaced a neighbor's fluorescent lights with LEDs to reduce local noise. Even with low-loss coax, the signal must be amplified at the tower to get the highest signal to noise ratio (SNR). (see photo)

InnovAntenna 8 element loop fed yagi

Pouring the base.

The azimuth rotator is a medium WWII surplus prop pitch motor (65 pounds) and the elevation is powered with another WWII surplus prop pitch motor, this one small (42 pounds). The "small" prop pitch rotor is not

Tower base electrical box. LNA in upper left. 6-Guage wire for azimuth and elevation rotors

much larger than the ubiquitous Hy-Gain T2X but delivers 15 times more torque. Fortunately for the ham community, K7NV refurbishes and modifies prop pitch motors for reliable long term use on antennas. (http://www.k7nv.com/proppitch/) DC power for the rotors is run from the house in 6 gauge, 3 conductor cables, one for each rotor, from the shack in the house. (see photos) The design of the elevation rotor system was initially conceived by Dave, KJ9I and Kurt, K7NV two years ago. Tim and his brother Dean, N9DL along with Ralph, N9BDR and Dave, KJ9I drove to K7NV's QTH in Nevada to pick up two massive elevation rotors, one for Tim and the other for Dave.

Next step: how do you feed this 1300 pound monster? All coax is ½ inch Heliax® (Andrew LDF4-50a). For the phasing harnesses, all of the cable lengths must be the same "electrical" length, not just the same physical length. Tim used his RigExpert® analyzer to determine the correct electrical length on each piece of the phasing cables. Each pair of antennas feeds into a custom built power divider (W7GJ design) at the center of the cross boom.

All of the power and feed lines are run through a 4 inch flexible pipe that is trenched and buried. In that pipe are two 171 foot runs of LDF4-50 Heliax® (one is a spare), two runs of 6 gauge, 3 conductor power cables for the rotors, and 110VAC for an electrical outlet at the antenna base. It is a very neat and tidy installation (see photo).

Prop pitch elevation rotor assembly. On the cover: Cross boom assembly with elevation rotor being lowered into place by a crane.

Trench for cables

So what is inside the shack? Tim has a Flex 6500 driving a Flex Power Genius® legal limit LD-MOS FET amplifier. For backup, he has an Acom® 1500 tube amp. Of course with the low noise amplifier at the base of the antenna, a sequencer is required to avoid damage. Tim is using a home built VE2ZAZ sequencer.

For software, nearly all EME work is done with Joe Taylor's JT65A. It is the same time schedule as regular JT65, which is a 60 second transmit/receive cycle. Tim also uses PST rotor software to control the Green Heron® controllers to track the moon. As we were sitting in his shack, every so often either the azimuth or elevation control would move the array a degree or so.

I asked Tim why he selected 6 meters for his EME station when 2 meters, 70 cm or even higher bands would be easier. "DXCC Challenge Award" was his instant answer. In addition to the satisfaction of conquering the technical challenges of building a 6 meter EME array, He also intends to further his Challenge award standings via 6 meter EME. According to the ARRL awards page, "The DXCC Challenge Award is earned by working and confirming at least 1,000 DXCC band-points on any Amateur

Cable inside flexible tubing

DXCC Challenge Plaque

bands, 160 through 6 meters (except 60 meters). Certificates are not available for this award however; there is a distinctive wall plaque available to display your achievement. Plaques can also be endorsed in increments of 500 additional band points."(See photo) How do you rack up entities (countries) on six meters and the bottom of the sunspot cycle? Working much beyond North America requires at least double hop E propagation or F layer propagation (which is extremely rare at this point in the cycle. Meteor scatter beyond 1200 miles is unlikely. Yes, there were some great E openings to Europe and Asia this summer, but the "season" for sporadic E is short. That leaves EME as the most reliable way to add to your count on 6 meters. In his first two weeks using this array, Tim worked 4 "new ones".

My final question for Tim; "Does the man in the moon use LoTW?" He chuckled but then said, "Sadly, many EME operators in other

countries do not use LoTW and with the current pandemic, cards from some countries are very, very slow in arriving"

In conclusion Tim said, "I would also like to add that, over all my years of building various antennas for chasing DX, this was the most difficult project that I have ever attempted. Without the advice and support of my EME Elmer's, KJ9I and WØVB I would never have even attempted such an undertaking. Having a successful 2-way EME QSO requires patience and persistence. Some QSOs can take over an hour to complete when Faraday rotation QSB is bad. Indeed, this is the ultimate DXing challenge."

System specifications:

Vertical tower: 24 feet above ground Rohn 65

Cross boom: 30 feet of Rohn 55

Array dimensions: 30.5 feet horizontal spacing, 27.5 feet vertical spacing

Gain:17.8 dB

Effective radiated power with 1,500 watts: 68,600 watts!

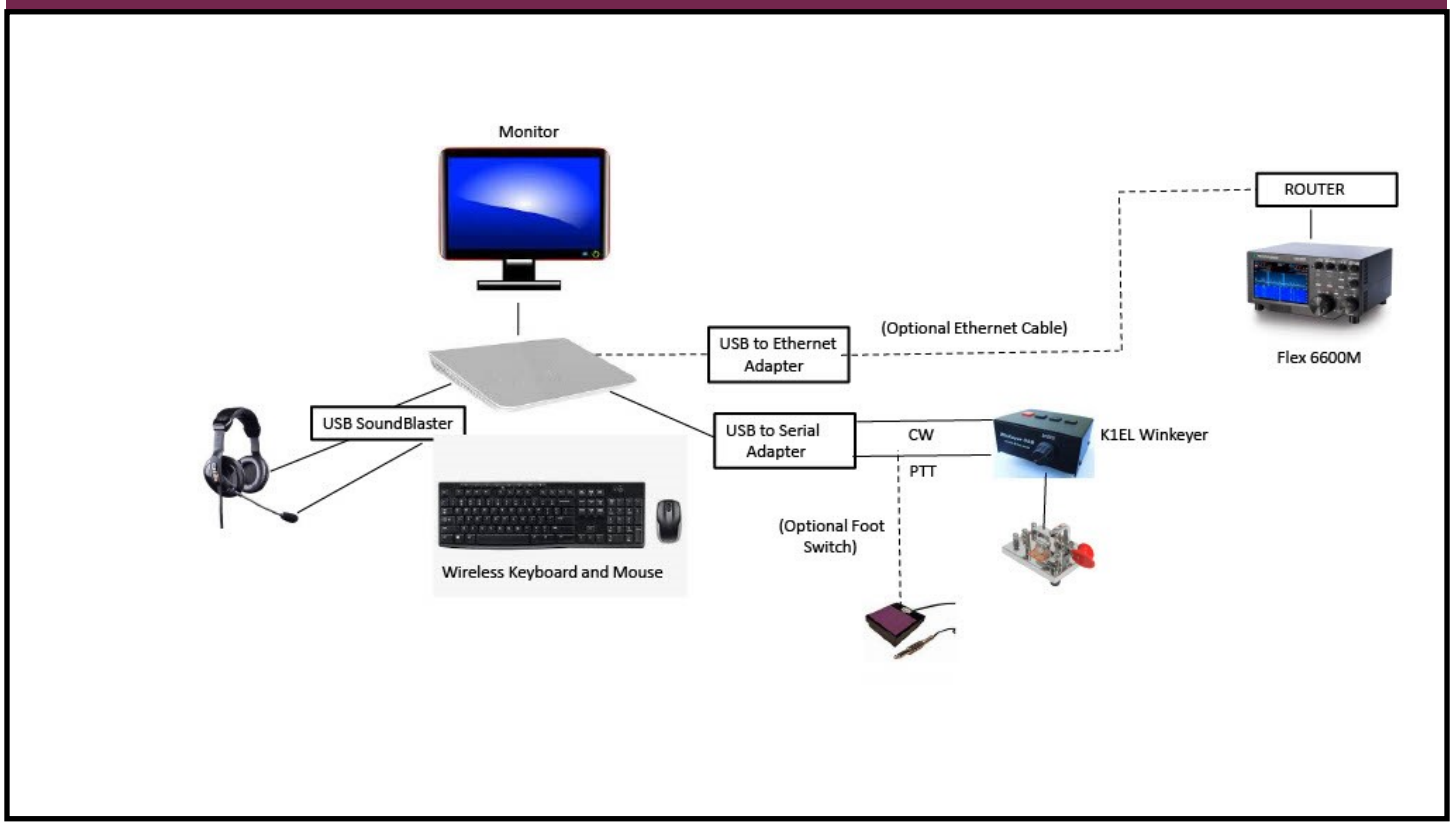
Tim has many more great photos of the system built and installation at https://n0tb.smugmug.com/EME-Project. There are also some interesting drone aerial photos at https://n0tb.smugmug.com/DroneImagery2

My thanks to Tim for his gracious hospitality and help editing this article. I learned a lot from him.

Another drone view

Contesting Without Touching My Radio

By Al Dewey, KØAD



Configuration for "no-touch" operation of Flex 6600M at KØAD

When I ordered my Flex 6600 a couple years ago, I was given the option of purchasing it with or without a front panel. This radio, like many others these days is capable of being operated entirely from the computer screen using the SmartSDR software. I realized that, when operating a contest, almost all of my interaction is with the N1MM logging software and not the radio. From the logging software, it is possible to change bands and modes, click on spots, and even display the pan adapter from the radio. I also have my station automated to the point where changing bands automatically switches in the right antenna and bandpass filter. The amplifier (if used) is automatically also switched to the right band and the external antenna tuner is switched to the right band and position. Still, I was not comfortable parting with the "knobs and buttons" on the radio itself so I ordered the "M" model which included the front panel. I've operated a lot of contests over the last couple years using the front panel of the radio in the traditional way. Tune the VFOs, occasionally switch in a filter, and occasionally adjust the volume up or down.

Objectives

My Flex 6600M came with a piece of software called SmartSDR which allowed complete control of the radio from one's PC. I installed it on my station PC just to try it out to see if it could control the radio. It seemed to work so I just set it aside as something I would get back to someday. That "someday" turned out to be 2020 ARRL Field Day. Like many, I had a lot of 'stay at home" time available this year. So I decided I would try to operate field day this year entirely from the PC without looking at or touching the radio. To make this possible, I physically located my laptop in another room of the house from where the Flex 6600M was located. Field Day was a great event to try this on because there was so much activity on all modes. Other than something just fun to try, my objectives were:

Were there any issues running SmartSDR and N1MM+ from the same screen?

Did tuning with the mouse wheel provide enough granularity when I was running and looking for signals?

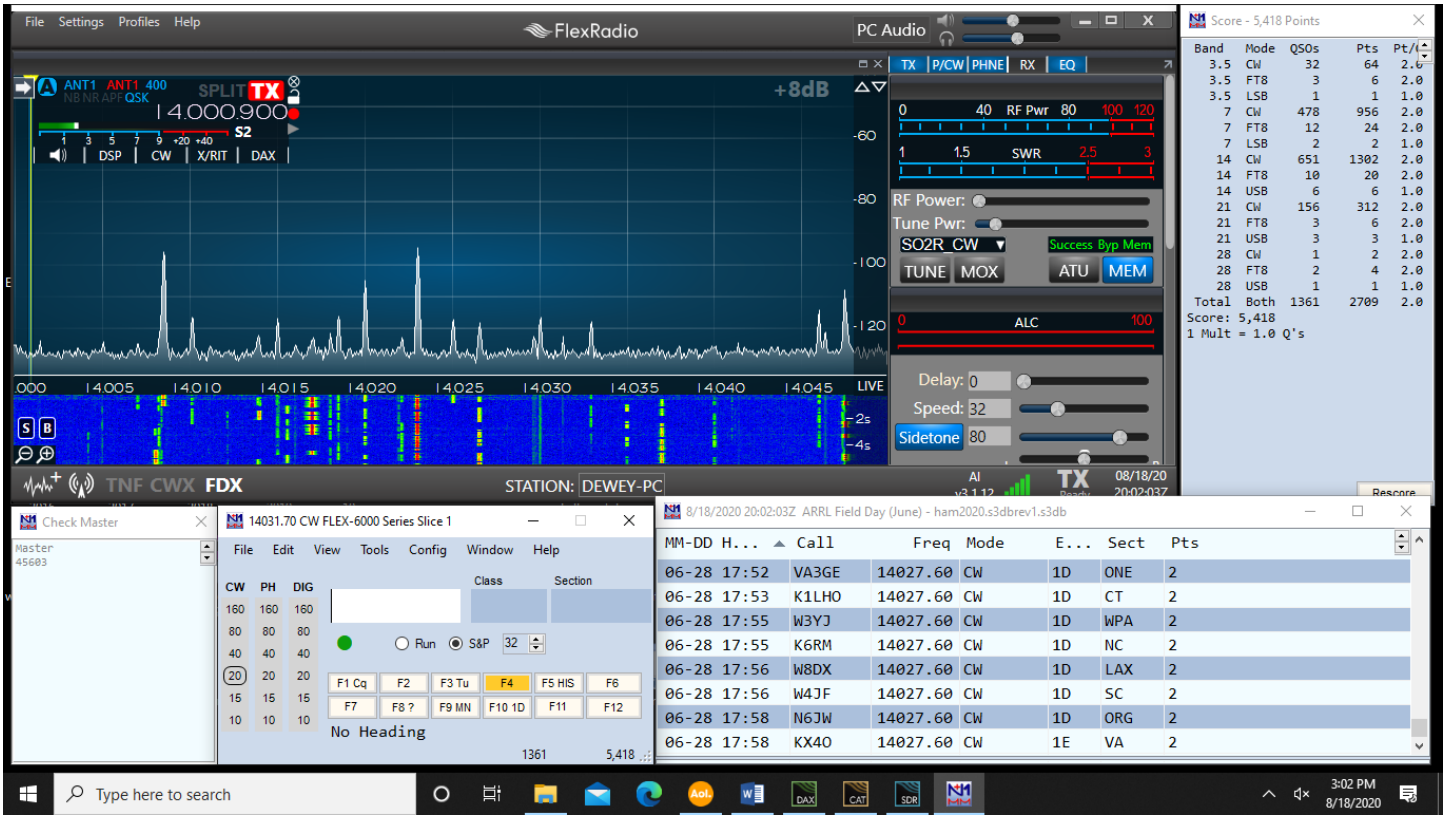
Was there latency in the audio between seeing signals in the pan adapter and hearing them in my PC headphones?

For SSB, could I easily use a microphone and footswitch (for PTT) connected to my laptop?

Could I monitor the CW that my Flex was sending?

Could I use a CW paddle at my laptop and monitor what I was sending?

With a lot of help from Pat, KØPC and



Screen layout of remote monitor for CW and SSB

Roger, KØMPH, I was able to work through each of these things. Pat and Roger really went above and beyond in answering my questions. Thanks also to Bill, WØOR for making a K1EL Winkeyer available to me.

Laptop Configuration Details

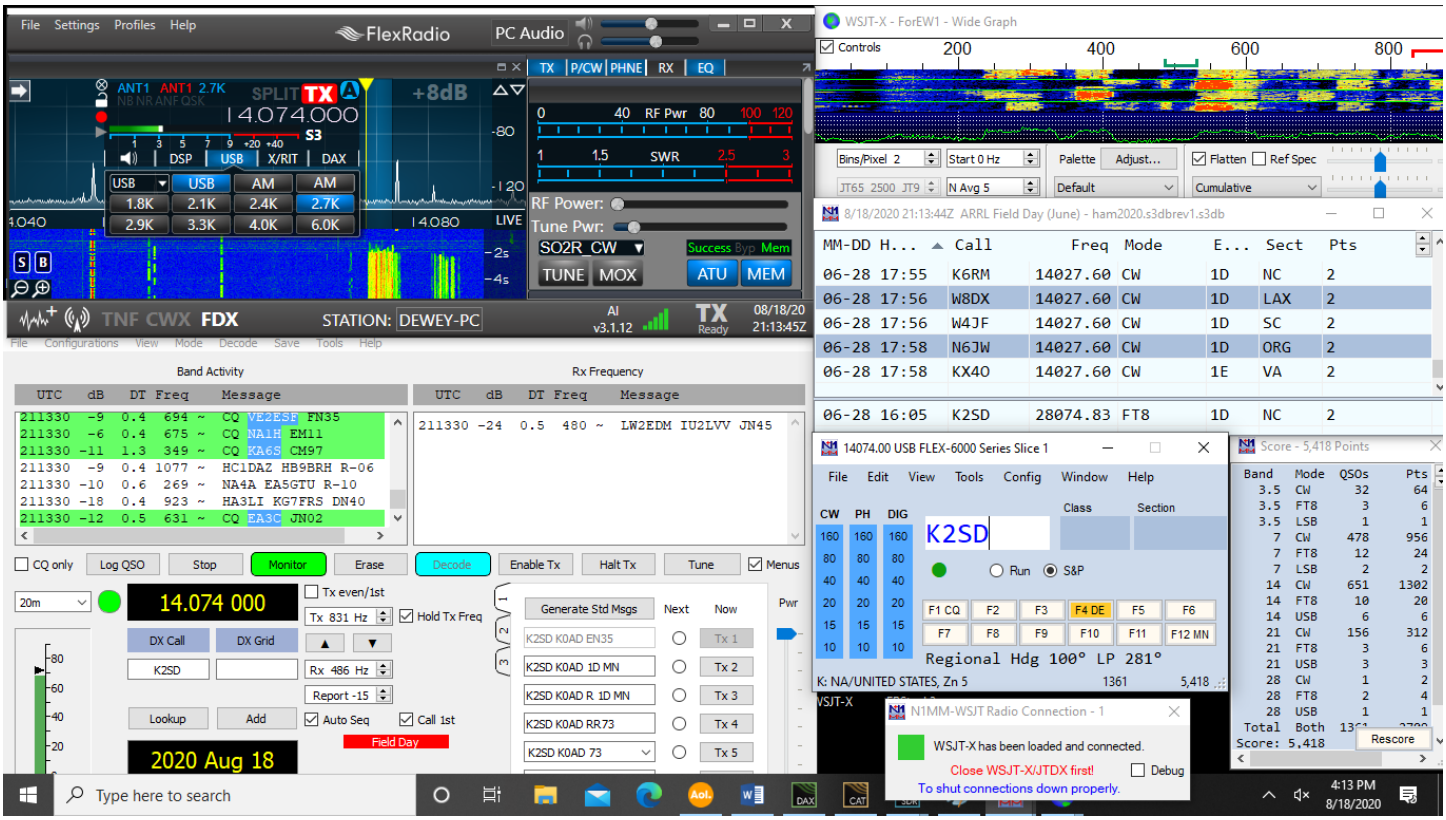
Given these objectives, Figure 1 shows how I hooked things up. Initially, I tried my usual wireless interface between my laptop and the Flex. However, there were occasional short one or two second dropouts using WiFi. When using a wired interface with a USB to Ethernet converter, the connection was much more reliable with virtually no dropouts. I was able to hear the sound fine by plugging my PC headset into the jack on my laptop. However, I could not get the Heil microphone to work with this interface despite having the correct adapter cable. So I used an old SoundBlaster USB converter to connect the Heil microphone to the laptop. That worked fine and I had plenty of audio for SSB.

CW was a little more complicated. Of course, the contest exchanges were easily sent from N1MM+ using the F Keys. However, there is no sidetone available for the F-Key messages at the laptop. I initially missed this but then found out that you can SEE the messages being sent in the N1MM+ window. Not perfect but better than blindly sending CW macros. Also, this only works if N1MM is set to SO2R even if you are not using SO2R. The next issue was being able to send CW with a paddle. Technically, you really don't need this during a CW contest but it is a comfort to have. To accomplish this, I used a solution from the Flex Community that involved using a WinKeyer and a special USB cable to connect the CW and PTT signals from the Winkey to the laptop. Using an app called RemoteKeyerInterface by NQ6N, the paddle could be used to send CW from the laptop. The local side tone was provided by the WinKeyer and worked pretty slick. My thanks to Bill, WØOR for making a WinKeyer available to me.

The final challenge was to figure out how to do Push to Talk (PTT). One solution was to connect the Foot Switch to the PTT connection from the WinKeyer. I tried that and it worked fine. Because I was not going to operate much SSB during Field Day, I decided on a simpler approach using an application called FRstack. This application has a feature in which you can assign certain Flex functions (including PTT) to an unused key on your keyboard. I chose the square left bracket symbol (i.e. "["). Once set up, pressing "["on the keyboard toggled PTT. I put a small PTT label on the "[" key. You have to be careful to pick a character for PTT that you are highly unlikely to use during a contest. Otherwise, PTT will be enabled when you might least expect it!

Screen Real Estate

I didn't spend a lot of time optimizing screen real estate. I knew that I had to have critical screens from both the SmartSDR software and the N1MM+ on the screen at the same time. I decided not to do SO2R so that made things a bit easier. Since I was using a laptop screen, I decided to use an external monitor. This was not absolutely necessary but cer-



Screen layout of remote monitor for FT8

tainly made it easier on my eyes during the 24 hours of Field Day. Figure 2 shows the layout I ended up with for CW and SSB operation. This seemed to work well. When I first tried this, I found it annoying to have to keep changing focus between SmartSDR and N1MM+. Then Pat, K0PC show me how to configure "Focus Helper" settings in SmartSDR that resolved this problem. Now I can keep the focus on N1MM. If I need to click on SmartSDR, I go ahead and do this and focus automatically returns to where I was in N1MM within milliseconds. Much better.

For FT8, I had the challenge of also having to have portions of the WSJT on screen. For using FT8 with N1MM+. I used the procedure documented by Don, AA5AU at https://www.rttycontesting.com/tutorials/n1mm/operating-ww-digi-with-n1mm/. Although I was not able to have all of SmartSDR, N1MM+, and WSJT all on the screen at the same time, I was able to have enough to make some QSOs. Figure 3 shows my screen layout for operating FT8 on Field Day.

Of course, another solution would be to add a second monitor to give me more room for things. However, I wanted to keep my "remote" site simple so chose not to do this.

Tuning and Latency

To tune the band with SmartSDR, I used a combination of clicking on a peak on the panadapter and slowly turning the mouse wheel. For the most part, this seemed to work fine. There were some times when I wished

the tuning was just a bit finer but the default was acceptable. There is a setting for "Tune Step Size" in the Flex that I did not play with. If I were going to do this a lot, I might invest in one of the FlexControl external knobs. This external knob plugs into your PC/laptop via USB and gives you the "feel" of tuning your radio. Perhaps it is a bit ironic that you use SmartSDR so you don't have to touch the knobs on your radio but you "sneak one in" with the FlexControl knob.

Although my "remote" laptop was on the same router as my Flex, I was still interested in whether I would notice any latency. As mentioned above, I DID notice some latency (and even occasional dropouts) when I used a WiFi (vs hardwired) connection between the remote laptop and the router. So, for this exercise only, I ran a 50 foot CAT 5 cable from my remote family room location to the router located in my shack upstairs.

My "non-technical" measurement of latency was how close the peak of a CW signal in the pan adapter was to matching the CW tone. Even with the hardwired interface, I did notice a slight delay. In talking to KØMPH, he had the idea of using a DAX channel for the RX audio instead of the PC Audio route in SmartSDR. He figured out a way to do this and it did, indeed, result in little or no delay between the pan adapter signal peak and the received audio.

SSB, CW, and PTT Interfacing

The details of how I set up SSB, CW, and PTT are described above in the "Laptop Configuration Details" section. Once these were all set up, I found that operating these modes from the laptop was basically equivalent to operating from the panel of the radio.

Final Thoughts

Perhaps this exercise is my first step in coming to grips with the fact that I will someday not be able to live in a single family dwelling with lots of room for antennas and towers. Deed restrictions, age, and perhaps even motivation will undoubtedly change the way I contest in the future. Some of our members today (new and veteran) are already doing most of their operating remotely. Some, like NØIJ and KØMPH are already doing most, if not all, of their operating remotely using rigs located at a vacation home. Others like KØBBC and WØAAE are making use of commercial (for profit) sites available via Remote Radio sites.

Of course there are many other technical issues to address when doing complete operation of your radio from a remote site. Things like powering your radio on and off, controlling your rotor (or rotors), having a solid and fast network connection, and possibly rebooting your shack computer are just a few that come to mind. These are beyond the scope of this article

Most modern radios today have a way to operate them with software. I challenge you all to give this a try to see what contesting feels like entirely from your computer screen without touching your radio.

Field Day, 2020, A Field Day Like No Other

-Dan Dantzler, WØJMP

2020 and the global pandemic have affected nearly all aspects of our lives. It certainly changed the way we all participated (or did not participate) in this year's Field Day. The ARRL implemented a "one time" rule change for this year's Field Day. That is, it allowed stations operating from permanent or licensed station locations using commercial power (Class D, Home stations) to work other class D stations. This allowed a greater number of participants and more activity but made it more difficult for low powered portable stations. Here is what your fellow TCDXA members did for Field Day 2020.

Kent Olson, KAØLDG, at his Field Day operating position at Ft. Abercrombie State Historic Site in North Dakota

Kent Olson, KAØLDG: Field Day 2020 was a solo / socially distanced event for me as I operated 1B from Ft. Abercrombie State Historic Site in North Dakota. My location was from the picnic shelter next to the parking lot and open area (for antennas) which was great for logistics. I set up early Saturday morning and activated Parks on the Air (POTA) entity K-5748 until Field Day started. A lot of POTA hunters chased me and I had quite a pileup going since this site has only been activated a few times. Once Field

Antennas at KAØLDG Field Day site.

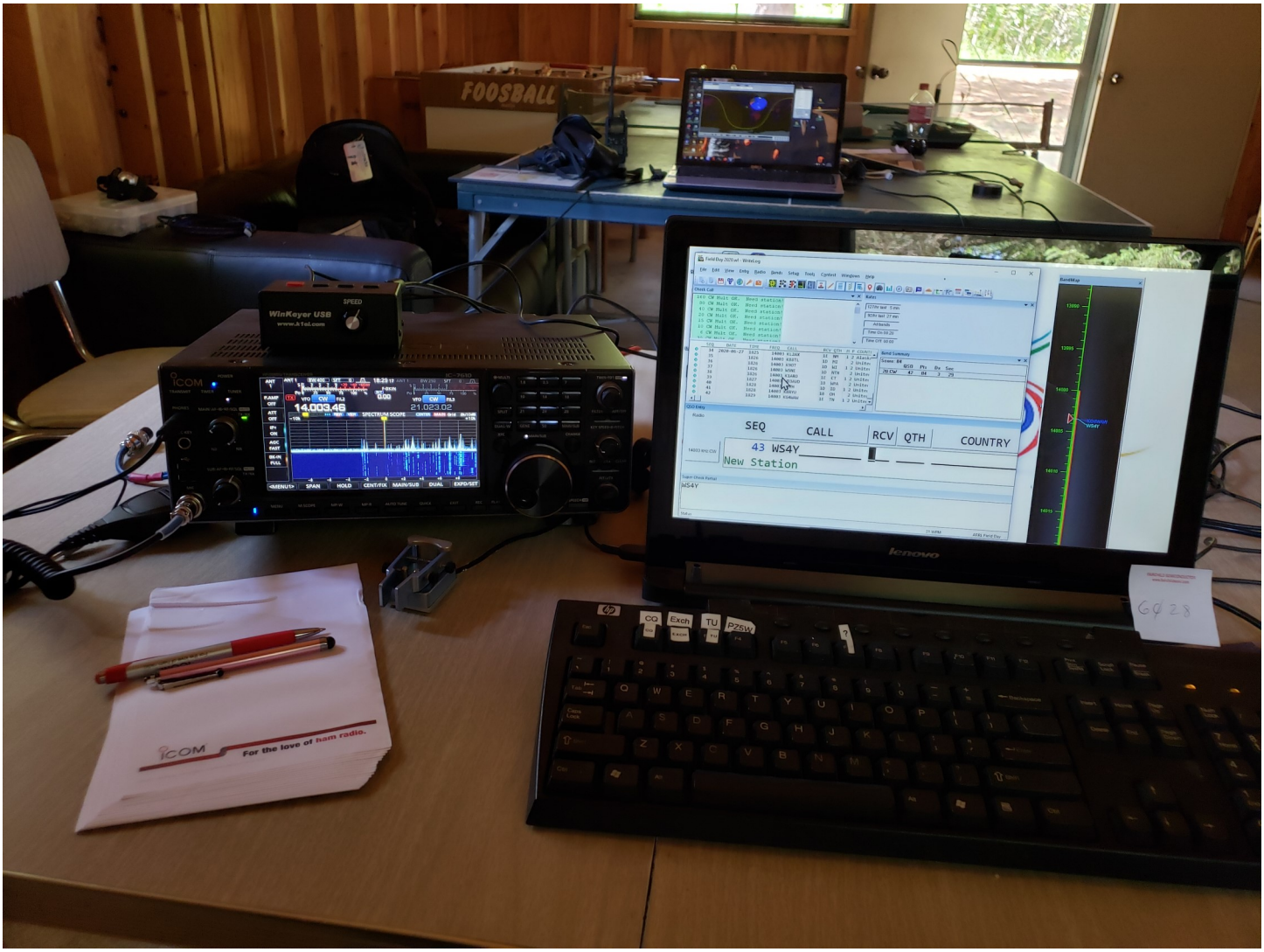
Day started though, I was just another 1B station in among the big gun Class D stations. My site had quite a few visitors who wondered what was going on, so I spent a lot of time visiting with folks about ham radio. That was just fine though, as the marginal band conditions and bigger stations ruled the bands, and I do Field Day for fun and not points. Being solo was an excellent opportunity to do everything alone and taking full blame for any mistakes. A lot can be learned about your portable setup this way, and I highly recommend doing it sometime. I didn't forget anything and actually over-packed, but that's why I have a truck! My setup was an Icom 706 MK2g running 100 watts into either my Buddipole dipole at 19', a ground mounted Buddistick, or an end fed Chameleon wire antenna. Everything was powered from a Bioenno 12volt / 20AH battery which was being trickle charged by a 125 watt solar panel. For logging I used N3FJP's ARRL Field Day Log on an old netbook, which ran off it's internal battery for most of the day. The historic site folks were very helpful, welcoming, and I even was allowed to use their restroom. One of the site's volunteers was a ham from years ago (she still keeps her license current) who stopped by to reminisce about past Field Days. I tried to convince her to get back on the air sometime, so time will tell if my sales pitch worked. I wasn't planning on operating the full 24 hours, and packed up around 10pm Saturday night. Overall I had a great time and would do it again!

Ron Dohmen, NØAT, Joined by NØKK:

Twenty years ago, my father-in-law bought a resort on Blue Lake, near Park Rapids, Minnesota. He doesn't operate it as a resort; he makes the cabins available to family members to use as a lake home. I've been operating Field Day from that QTH almost every year for the past 20 years.

It started out with me operating class 1B using simple antennas and operating when I had the time. Then the operation gradually grew until we were operating class 2A with many operators. Class 2A allows an extra transmitter for the VHF bands, and an extra transmitter for the GOTA station (for newly licensed hams). That four transmitter Field Day operation required lots of antennas, bandpass filters, networked computers, etc.

During those years I was joined by a long list of operators including: NØSTL, NØKK, KØIR, KØAD, KØAUG, KØBBC, WØGJ, KL7YL, AE5E, N5QQ, WØOR, KØADX, KBØGII, and KEØWMG.



NØAT & NØKK operating positions

As spring turned into summer this year, I felt this might be the first year in a long time when I didn't operate from the Blue Lake QTH. Then Kirk, NØKK and I had an idea. We would operate a minimal station, adhering to covid distancing requirements. The separate cabins at the QTH kept our families separated. We decided to operate with only one of us in the shack at a time. We had no set schedule, we operated until we got tired, then the other took over.

To make set-up simpler we used only one hf antenna, a 9 band Off-Center-Fed Dipole as described in August 1990 QST, page 33, Figure C. This antenna was originally designed by DJ7SH and DL1BBC. As with most off-center-fed antennas, you have to be careful to decouple the feedline. A generous supply of ferrites did the trick. No rf in the shack.

My Icom IC-7610 transceiver was used on the hf bands. Kirk used an HT and handheld antenna to make the satellite QSO. We captured all but a couple of the bonus points available to us.

Our final tally of QSOs is 1189 CW, 99 FT8 and 5 SSB. Our single station operation made a few more QSOs than the four stations combined last year. I think the conditions were better this year and there was a slew of 1D stations to work this year.

Kirk and I had a lot of fun putting together this minimal operation on the air. With only one rig and one antenna the setup and tear down was quick and easy. And the WX was perfect, low 80s during the day and 60s at night.

Mike Cizek, WØVTT, and the Winona Club: Our local club, the Winona Amateur Radio Club, is a small group (about 40 members) in a small town with members who are active in many different aspects of ham radio. We are a true general interest club, with a focus on public service in our community. Besides Field Day, club members gather to operate the Minnesota QSO Party every year, and operate an occasional special event station. Thanks to a lot of hard work by a lot of club members over the years, we have built a very good relationship with the city and county governments by participating in public service events, training drills, and local emergencies. We regularly have use of the County's mobile command center for our operating activities.

Winona Amateur Radio Club members mount a beam onto a portable tower.

PREPARATION

Field Day was a little different this year. With this nasty virus causing cancellations of almost everything, there was some doubt as to whether or not we would participate and how

we would manage. Most hams stayed home this year; fully 78% of our QSOs were with stations operating from home. We knew that we would need to make some serious changes to our usual operating plans.

The biggest change was in our operating site, since were not able to use the city parks this year as we had in the past. Erik Brom WBØNIU offered the use of his great-grandparent's 170 year old farmstead in Rollingstone Township, a few miles outside of town. On Saturday afternoon a number of us had the pleasure of meeting Erik's Aunt Jean Gardiner, the current owner of the property. She was pleased to see all of the activity at the farm and we received a nice local history lesson from her.

The mobile command center was immediately ruled out and we set up widely separated stations in screen tents instead. This had the added advantage of using shorter feed lines to each station. It also required changing our usual designation of a phone and CW station to defining the stations by band(s) of operation, with each station capable of operation on either phone, CW, or digital modes. Dr William Davis MD and Dr Daniel Goltz PharmD (aka WØMZN & WKØW) came up with a set of procedures to keep us all safe and healthy during the weekend. They detailed how to clean operating positions on operator changes, when we had to wear face masks, ruled out the usual club potluck dinner on Saturday evening, specified what equipment could and could not be shared between operators, and insisted on only one person at a time at any station. At first, this seemed like it would be a huge burden, but looking back, the extra steps we had to take were just mildly annoying and inconvenient. They didn't really slow us down too much and probably didn't cost us any QSOs. As I write this, it is now six weeks after Field Day, and all of our members are still healthy.

Going up! The Winona Club raises their beam

SETUP

Setup began around 11:00 on Friday morning when KEØTNM delivered the 50’ crank-up tower trailer. It helps when the County’s Emergency Management Coordinator is a

Lance Tagliapietra, ADØUT, of Winona, operates with all the comforts of home

club member! Naturally, it started pouring rain before we finished, but we managed to get the tribander mounted and the tower ready to raise on Saturday morning.

People started arriving around 9:00 on Saturday morning. First orders of business were raising the tower and installing the 40m dipole. This was followed by putting up the G5RV, laying out power cables, setting up shelters, setting up radios, computers, the WiFi network, hooking up everything, and trying to make it all work. Naturally, nothing worked at first, despite having been tested extensively beforehand. After a lot of fussing, and more than a little sea-faring language, we had two stations on the air. ADØUT made the first QSO on 20m SSB at 1829z and W9LSE fired up on 40m SSB a short time later, but there was still a lot more work to do.

AC9TO and WBØNIU spent nearly three hours getting our GPS timing signal to synchronize computer clocks through the network, which is absolutely essential for FT8 operation. WBØNIU made our first FT8 contact on 20m at 0021z. Our most recently licensed member, KFØACN, provided the last piece of the puzzle when he figured out how to make the IC-7300 on the 80m station work on FT8. It took over seven hours, but we now had all three stations working on all three modes.

OPERATING

So, how did we do? Rolling up a big score was never very high on our priority list. We introduced some new hams to HF operating for the first time, and some others operated digital modes for the first time. FT8 was something new for us this year, and it was a real learning experience, especially for the setup crew! Even with all of the setup problems, we had fun and made a fair number of contacts. A dozen of us combined to make 878 QSOs; 436 on phone, 368 on CW, and 64 on FT8. Most QSOs were on 20 and 40 meters, with just a handful on 80, 15, and 10.

TAKE DOWN

Around 11:30 Sunday morning, we felt a shift in the wind and a sudden drop in temperature. Remembering the deluge we had Friday during setup, we decided it was prudent to stop operating a little early and get packed up before the rains came. Everyone got straight to work, and we were packed up in record time, with the sun still shining.

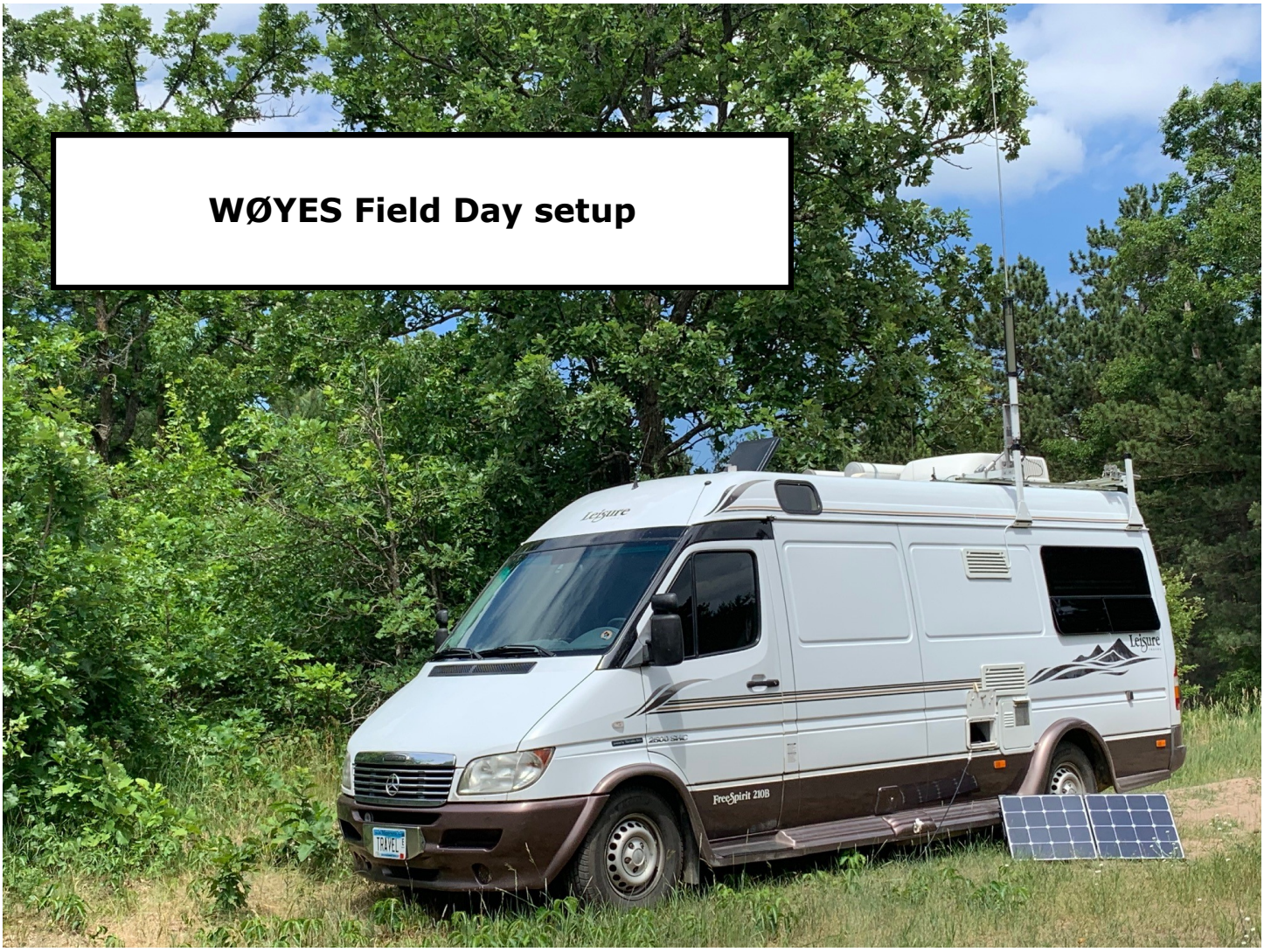
FINAL THOUGHTS

We had fun, we introduced some new hams to some new things, and most importantly, it appears that everyone stayed healthy. We learned that despite the nasty germs floating around our world today, we can still enjoy amateur radio, and if called upon, we can still provide an effective communications service to our local community. I'm not a big fan of the new digi modes, but it was interesting to see folks experiment and learn something new. Let's hope that by June 2021, we can all return to a more normal Field Day operation.

Pat Gearty, WØYES: Like many other events, ARRL Field Day 2020 was very different this year due to COVID-19. I AM A MEMBER OF THE Maple Grove Radio Club (MGRC) which did not convene as a group like we usually do. We were encouraged by the club and ARRL to ***GET ON THE AIR*** individually and show the world that Amateur Radio operators remain adaptable to changing situations. The club ran a Field Day Status Net on the 147.000 repeater providing a method for activity updates.

I operated as **Class 1B.** (A portable station set up and operated by one person.) I setup my camper van as dispersed camping in the Sand Dunes State Forest located north of Big Lake. The heat during the day was a bit uncomfortable but it cooled nicely at night. The

Entrance to the WØYES Field Day site



WØYES Field Day setup

only people I saw while there were four horseback riders who passed through my site Sunday morning.

My antennas were two: An off center fed (OCF) dipole strung between trees and the screwdriver vertical on my van. Setting up the OCF dipole was challenging for me. I used my AIR BOSS ANTENNA LAUNCHER which I've used before. Working in the forest is more difficult than the less dense locations I've previously used it. I was only 60 feet into the woods but lost orientation and visibility easily. I wished I had a teammate to assist with this! It took me 2 hours to get the antenna up and that delayed my getting on the air. It was worthwhile. While operating I switched between my two antennas and the OCF delivered better results than the screwdriver vertical. The advantage of the OCF improved my successes in getting through the pileups.

My 100 watt Kenwood 480 radio was powered by a solar charged battery. As usual on Field Day, the bands were very crowded and active. Not typical was the very high number of Class D (home) stations on the air compared to class A and B (portable, in the field) stations. That made it more challenging for field stations to get through the pileups. Operating on 80, 40, 20, 15 and 10 meters I had

The WØYES OCF dipole finally in the air!

good results making 170 SSB contacts while working 41 states and 3 provinces.

I had a great 2020 Field Day but without the MGRC team it was cheerless. I missed greatly the friendships made and renewed, teamwork, sharing, learning and teaching that have been a part of our previous events at Gleason Fields. And the food was ***terrible*** this year! I have been spoiled by the excellent meals of previous years provided by club members Ruth and Jim. I hope we get back to ***in person*** club gatherings soon!

Note from the TCDXA President

Bill Mitchell, AEØEE

This summer has been a strange one for me. The COVID-19 pandemic continues as strongly as ever, with a mounting death toll and large numbers of people who may experience long-term ill effects. For me, one consequence of the pandemic is that I have barely been on the air all summer, with an S9 noise floor on 10 m here in my apartment and a reluctance to go operate from the park---let alone further afield.

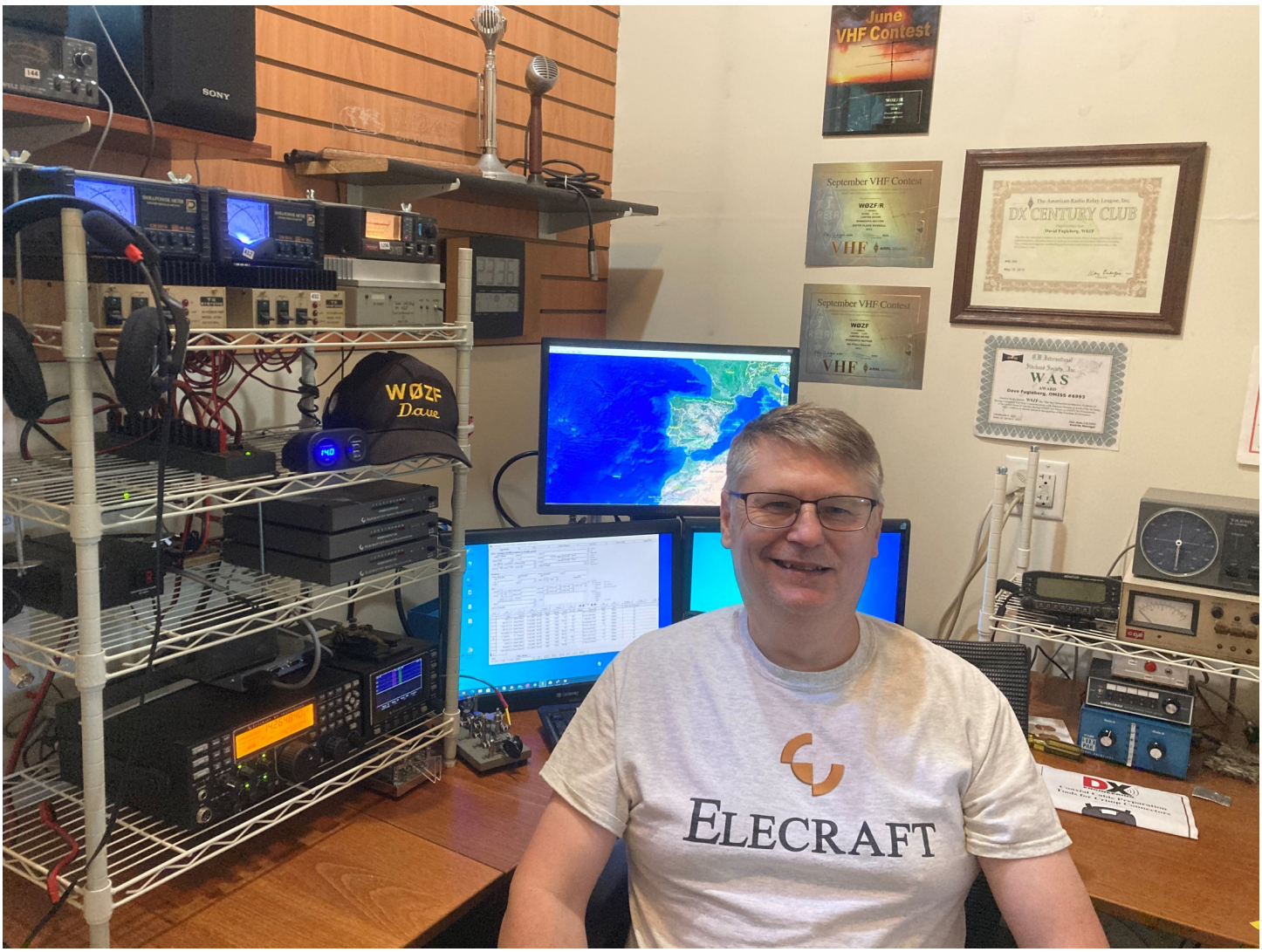
On the brighter side, many hams have been learning to use digital tools for communication, which has made it easier than ever to get together remotely. I hope we can take the lessons we have learned in the last year and use them to make amateur radio meetings and activities more accessible, even when the pandemic is over.

There are some changes coming to the TCDXA in the next few months. I will not be seeking re-election as President, but instead focusing my energies into my new role as ARRL Section Manager for the Minnesota Section, which I will begin on October 1st. If you are interested in seeing the TCDXA continue to operate, please consider whether you can take on a leadership role.

In the meantime, I encourage you to upload your DX logs to clublog.org to see how much DX we can work during the pandemic, or at least during Calendar Year 2020.

73 and Good DX!

Member Profile — Dave Fugleberg, WØZF



This month marks 40 years since the long-awaited envelope from Gettysburg arrived with my Novice Class Amateur Radio License bearing the callsign KAØJNG. I was excited to be a real ham, but really had no idea what to do next. It would be more than two years before I got on the air…more on that in a moment.

Growing up on a farm in northern Minnesota during the 60s and 70s, I was fascinated with science and technology. The race to the moon was underway when I started elementary school, and there was general excitement about all the new space-age technology. One of my brothers enjoyed tinkering with electronics, and built an intercom system out of an old tape recorder connecting our bedroom, the kitchen, and the dairy barn. I was hooked. By the fourth grade, I had amassed a collection of batteries, flashlight bulbs, wires, toy motors, switches, and the like, and enjoyed building simple circuits. I pored over my brother's old Popular Electronics magazines and began to learn some of the basics of electronics. I first heard of Amateur Radio

QSL card from 1990

in those pages. I didn't know any hams, or how to get started, but those articles planted a seed that would grow later.

When I was 13 or 14, a relative gave me an old Zenith console radio. I found schematics and information in the local library, and was able to bring it back to life. Stretching an aerial from the milk house window to the peak of the barn, I was I was amazed to hear faraway shortwave stations at night.

My high school offered some vocational classes, including Electronics I and II, which I took in 10th and 11th grade. I enjoyed both math and science, and I found practical application of both in electronics. In turn, things I learned in electronics class would later turn up in more advanced math classes. It was also fun to blow stuff up in the lab.

Around this time, while perusing the giant JC Penney catalog, I came across a ham radio beginner package. It included the book "Tune in the World with Ham Radio", a Morse code tape, and a US call district map. I don't know when the ARRL started or stopped selling this through JC Penney, but there it was, and I ordered it. With the book and tape, plus a home brewed key and buzzer, I learned enough to attempt the Novice class code and theory tests.

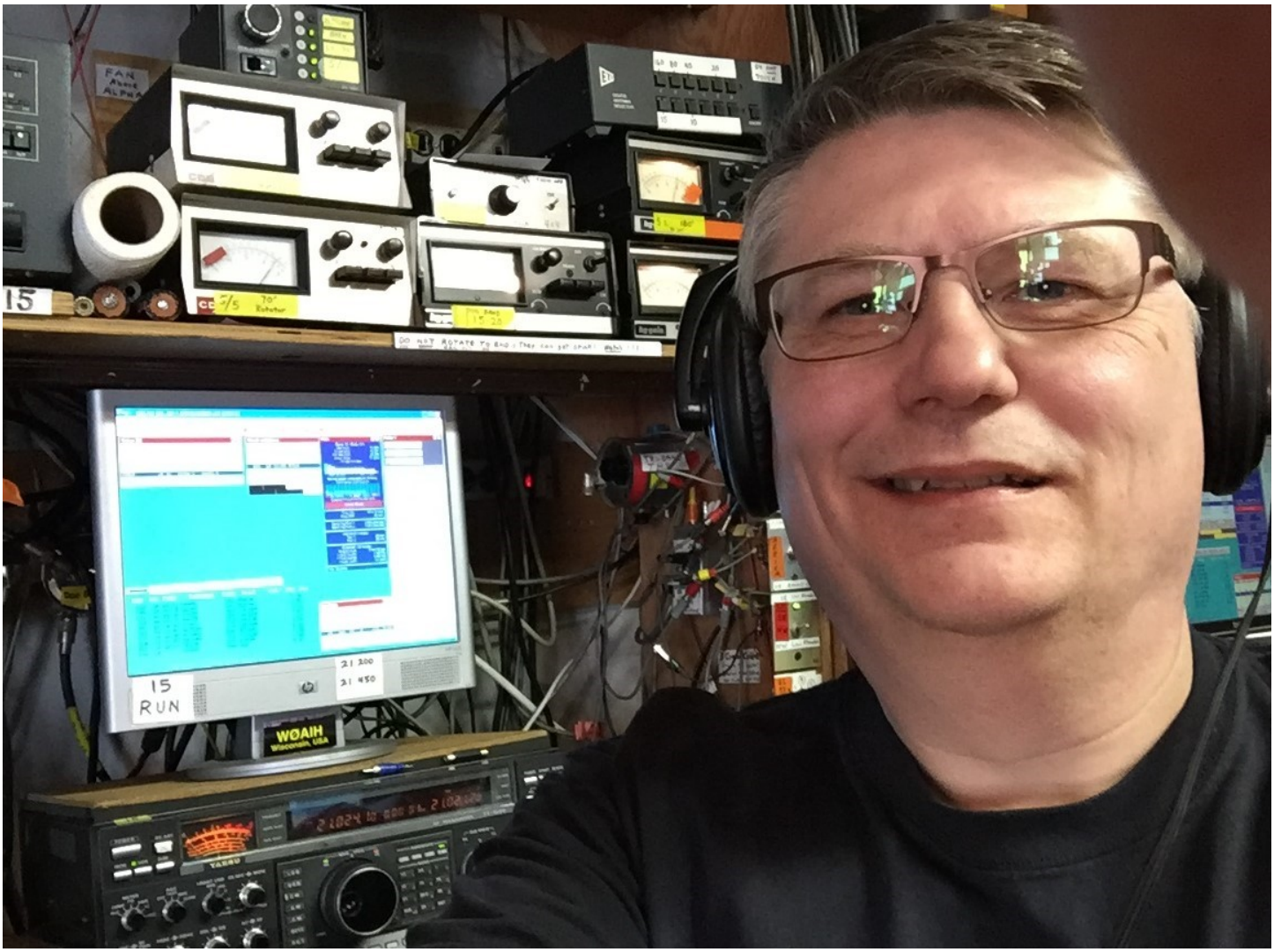
The next problem was to find a way to take the exam in far northwestern Minnesota. Roseau County is about as far from the FCC Field Office in St Paul as one could get without hitting the Canadian border. In those days, any General Class ham could administer the Novice code test, certify it on a form, and send it to the FCC. They would then receive the written exam, which they would administer, sign, and send back to the FCC for grading. Upon asking around at school, I was directed to a man in his 80s who lived in town. He was glad to help a kid who was interested in radio, and was a fine CW op, having worked as a telegrapher for the railroad. John showed me his shack and helped me with my CW. One day, I was copying CW at his kitchen table as he sent items from the local paper at five WPM. After a while, he looked at my notebook where I was furiously writing what I heard. He said "you passed", signed the form, and sent it in. I didn't know he was testing me until it was over! I waited for the written test to arrive, and then waited weeks more for the results to come by mail.

By the time my license arrived, I had moved to the Twin Cities to attend a two-year Christian college. Between classwork, music, part time jobs, and spending time with a certain young lady that I met in college, there was no time (or money) for radio, and the license remained unused.

Upon graduation, I enrolled at Northwestern Electronics Institute (NEI) to start a career as an electronics technician. I was able to test through the first quarter, thanks to my previous study, and dove right in. I soon learned that some of my classmates and instructors were hams, and we started a lunchtime study group to work on upgrading our tickets. While at NEI, I upgraded to Technician, then General and Advanced, and obtained my General Radiotelephone License. I bought a crystal-controlled 2m FM rig for my '73 Nova. A filthy, non-working Galaxy V transceiver followed me home from a hamfest, and I restored it to working order as a lab project.

One day while chatting with friends on 2 meters, I mentioned that I was getting married on the last weekend of June. They were aghast – that's Field Day! This was a terrible idea, they said, because now my anniversary would always fall around that weekend, and I'd never get to participate in Field Day. While they were (mostly) right about Field Day, they were wrong about it being a terrible idea. We celebrated our 37th anniversary this year, and my wonderful bride has always been very supportive of my hobby.

My time at NEI went quickly. I originally hoped to work in the 2-way radio business, but by graduation, I had a full-time job as a disk drive technician with Magnetic Peripherals. This led to other electronics jobs, and eventually into a career in computers and information technology. In retrospect, that was for the best – it opened a lot of opportunities, and still lets me enjoy radio as a hobby. I like to dabble with all kinds of modes, bands, and equipment. I enjoy building equipment, both from kits and from scratch. I've built everything from simple receivers and station ac-



Dave operating at The Farm, WØAIH

cessories to a scratch-built color TV transmitter. On the operating side, I enjoy HF contesting, DXing, and VHF/UHF roving (none of which I'm particularly good at).

In those early years, I was on the air only sporadically, first with the Galaxy V, then a FT-101E. I finally had space for a proper hamshack when we bought our first home in 1988. I was more involved with VHF packet and UHF ATV than with HF, and the few HF contacts I did have were typically US or Canadian stations. I packed up my equipment for the move to our current home in 1994, and it remained in storage for over six years.

In February of 2001, I cleared off a shelf in the basement for my FT-101E, and strung a dipole in the trees. A few days later, a strange callsign caught my ear - D68C. I had no idea where that might be, but I worked him, and then looked it up in an atlas. My little station had worked the Comoros Islands, over 9000 miles away! Until then, I thought working DX was strictly the province of the big gun stations in the magazines. I never considered

that it was possible with my meager equipment. Although that contact kindled some interest in DX, I didn't really pursue it.

At the time, I was working in IT at Northwest Airlines. One of my coworkers was Matt (KØBBC). We decided to fly to Dayton for Hamvention that year, and this became an annual tradition. I've attended Hamvention every year since, until this year's Covid cancellation.

Over the next several years, I operated only occasionally. I upgraded radios (first a used FT-890, then a new FT-450) played with PSK-31 and SSTV, and started working state QSO parties and HF nets. Outside the occasional random contact, I worked very few DX stations. Upon changing employers in 2006, work responsibilities increased and my sporadic activity slowed to a trickle.

In 2010, I relocated my shack to the garage for easier access to antennas. KØBBC was a frequent guest op, and we began some multi-op contesting. It was apparent that my antenna situation needed an upgrade. I purchased a used crank-up mast with a rotor and a Mosley TA-33jr tribander that fall, and erected it next to the garage the next year.

2011 turned out to be a pivotal year for my ham radio career. On a whim at Dayton, I took and passed the Extra exam. I decided to upgrade my callsign as well, and soon KAØJNG became WØZF. The tribander project was complete just before the contesting season that fall, and I quickly learned what I had been missing all this time. ATNOs began coming quickly, as did DXCC. I had never heard so many stations before. I joined TCDXA shortly thereafter, and have very much enjoyed getting to know 'real' DXers and hearing your stories.

In the intervening years, K0BBC, Bill (AEØEE) and I have had many ham radio adventures, including contesting, Dayton trips, special operating events like National Parks on the Air and W1AW/Ø, and VHF roving. I was privileged to contest with Paul (WØAIH) out at The Farm several times, and certainly miss his infectious enthusiasm. I run 100 watts and low antennas at home, so the amplifiers and acres of antennas at The Farm were an experience I will never forget. From my modest home station, I've worked lots of club members who have traveled to exotic locales for DX contests, as well as several high-profile DXpeditions over the last decade.

My current station is an Elecraft K3/P3 combo, the Mosley tribander, a 130-foot doublet with an autotuner, and an 80/40 vertical. The K3 does double duty as the IF rig for VHF/UHF transverters. An ICOM IC-7100 serves as a mobile station for HF plus 2m and 70cm.

Perhaps someday I'll have the free time and the operating skill to be the DX. Perhaps the virus will die out, and the solar flux will come roaring back. Until then, I am content to putter around on the bands, chase some DX, casually contest, and enjoy ham radio at my own pace.

73 de WØZF

Member Profile Directory

-Dan Dantzler, WØJMP

Have you ever wanted to look for a member profile in past issues of The Gray Line Report? I have and found it a very tedious and time-consuming undertaking. Here is a spreadsheet listing all TCDXA member profiles published during the history of the newsletter.

Call	Name	Issue date	Call	Name	Issue date	Note
ABØJ	Tom Weigel	March, 2016	NØKK	Kirk Pengelly	September, 2017	
AEØEE	Bill Mitchell	September, 2016	NØTB	Tim Blank	March, 2004	
K4IU	Frederick J Regennitter	November, 2010	NXØX	Brian Bird	February, 2011	
K9OW	Bill Pike	July, 2009	W2JGR	Jules Freundlich	September, 2005	SK
KA9FOX	Scott Neader	March, 2014	W9CLA	Craig Anderson	March, 2010	
KBØEO	Dam Sonderlund	March, 2013	WAØMHJ	Mark Endorf	September, 2019	
KØAD	Al Dewey	December, 2011	WBØN	Bert Benjaminson	September, 2015	
KØBBC	Matt Holden	March, 2019	WDØDAN	Scott Johnson	March, 2005	
KØBUD	Mike Sigelman	June, 2017	WGØM	Mike Gulbranson	December, 2016	
KØCN	Al Senechal	June, 2019	WØAIH	Paul Bittner	December, 2014	SK 2018
KØCOM	Mike Sell	June, 2016	WØDJC	Don Currier	October, 2004	
KØHB	Hans Brakob	September, 2012	WØFLY	Larry Groom	March, 2006	now WØSX
KØJUH	Jim Junkert	March, 2018	WØFS	Clay Conard	September, 2014	
KØKG	Keith Gilbertson	June, 2004	WØHT	Steve Towle	July, 2014	SK
KØKO	Bill Ham	March, 2009	WØJM	Jeff Martin	June, 2014	
KØKT	Bill Meeker	March, 2012	WØJMP	Dan Dantzler	March, 2016	
KØMD	Scott Wright	September, 2011	WØJX	Dennis Sokol	June, 2006	
KØPC	Pat Cain	September, 2008	WØRX	Dave Willis	June, 2013	
KØQB	Jay Bellow	June, 2015	WØVTT	Mike Cezek	June, 2018	
KØQC	Donn Taylor	September, 2006	WØWG	Mike Warren	December, 2005	now W5MAZ
KØQQ	Art Ekblad	December, 2013	WØXV	Jeff May	June, 2006	
KØUU	Jeff Strandberg	December, 2015	WØZF	Dave Fugleberg	September, 2020	
KØXB	Rick Borken	September, 2013	WØZT	Bob Milbert	December, 2004	
NGØZ	John Rusciiano	December, 2017	WØZX	Tom Traughber	June, 2011	
NØAT	Ron Dohmen	December, 2009	ZL2AL	Lee Jennings	December, 2012	SK 2015
NØIJ	John Boumgarten	March, 2015	ZS6WB	Hal Lund	July, 2010	

The MWA Contest Corner

Contest Burnout or Just a Pause?

By Al Dewey, KØAD

I have been thinking a lot lately about whether there is a general case of contest burnout going on right now. Or has the pandemic and everything else going on in the world pushed contesting to the background? Propagation has not been great but it seems to be gradually improving with long openings on 15m and even some on 10m. Still, I do not sense the normal excitement about upcoming contests on the MWA reflector. Although there were 20 MWA participants in a recent NA QSO Party, only two of them did a full effort (which is only 10 hours). All the rest were part time – typically only a few hours.

The cheerleading by NØHJZ certainly helps during the fall and winter. But I sense that perhaps there is a bigger shift going on. Our contest ranks are getting older and many of us are either unwilling or unable to do a full contest effort anymore. The pandemic has complicated things further making multi-ops more difficult especially those in which you have to travel to a DX locations.

A lot has been written on the future of amateur radio. An interesting article on the future of amateur radio, in general, was forwarded to me recently. It's no secret that the things that attracted many of us to the hobby are not necessarily things that appeal to young people today. I think the popularity of the digital modes such as FT8 are a good example of that.

Having said that, I am encouraged by a few things also. It's encouraging to hear guys like WØAAE doing some major contest efforts at the age of 16, often using the on-line Remote Radio sites. The activity level in some of the shorter contests like the CWTs on Wednesday and the shortened NAQP seems to be up. Also, activity on 15 and 10 seems to be improving when many thought those bands were totally dead. Another thing that also encourages me is the number of amateurs still interested in learning CW. I am an Advisor for CW Ops and, on a recent Zoom meeting of Advisors, I learned that 500 to 800 students have been signing up worldwide each semester (3 semesters per year)! Besides learning and improving CW skills for hundreds of amateurs per year, they are also exposed to contesting techniques (as well as simulated contest QSOs) during the on-line classes. It is always a kick for me to work

one of my past students in a CW contest. By the way, if you are interested in teaching a CW class, let me know and I will connect you with the right people.

Why I Post My Scores to 3830

Not everyone is a fan of posting their contest scores to www.3830.com at the end of a contest. I think the main reason contesters may not do this is because of the possible "category shopping" that may result. Let's say that you operated in the ARRL DX Contest as a single operator using 100 watts. When you get ready to send in your score, you check 3830 and notice that your 100 watt score is the second place Low Power score in Minnesota. However, you notice that you would actually place first in Minnesota if you entered in the High Power category. Or, perhaps, in ARRL Sweepstakes, you operated without assistance (i.e spotting network) but according to 3830 your score exceeds all those in the Unlimited Category. You could then choose to enter in that category and end up with a certificate or maybe even a plaque. In both these cases, of course, it is assumed that any score that might have exceeded yours was not entered on 3830. Although both of these situations conflict with the spirit of the contest categories, they are legal.

Despite the possibility of what I just described, there are **three** big reasons I still post my contest scores to 3830. First of all, it's fun to get an idea of how I placed while the contest is still fresh in my mind. Secondly, the Score Summary generated by 3830.COM is easy to cut and paste into my score summary on the MWA Reflector. Finally, and most important to me, is the feature of 3830.COM that allows you to view your contest summaries for many years in the past. To do this, you simply enter your call in the box on the upper right side of the page and press search. When I do this, I see a list of all my contest results all the way back to 2002. It even includes scores for multi-ops in which I was a participant! Now, when I am getting ready for a contest, I go to 3830 and call up my Contest Summary for the last few years to get a feel as to what would be reasonable goals for this year's effort. For me, this is way easier than trying to find the N1MM log or Cabrillo File.

MWA Fall Meeting Schedule – Tuesday, September 22

Like many meetings recently, the MWA Fall Meeting will be virtual this year. It will be held via Zoom on **September 22**. A general chat session will start at 6:30 PM with the formal meeting starting at 7:00 PM. It should be an interesting meeting with a presentation by W0ZQ on how to get on 160M from a normal size lot as well remote Multi-Op Contesting by KØBBC and WØAAE. Everyone is invited but you must register prior to the meeting. Details on how to do this along with other information about the meeting is located at: https://www.w0aa.org/. This is traditionally the "Pizza Meeting" so perhaps you can all enjoy a slice of pizza from home while you are "attending" the meeting.

See you in the pileups.

Dollars for DX Report

Mike Cizek WØVTT, DX Grant Manager

"It's been a quiet week in my home town, here on the edge of the prairie..." With everything getting canceled or postponed, we have not had any requests for DXpedition donations for the last six months. There are a few likely candidates coming up in 2021 (JXØX by LA7GIA, and a group going to Chesterfield Reef) but your board has decided to wait until they ask for help, rather than offer it unsolicited.

Even though there are no big DXpeditions active, there is still plenty of DX on the bands. Six meters was open into EU and AF earlier this summer, even here in the upper Midwest, and provided some new band countries for some of us. Twenty meters is often open over the pole in the early mornings and again in the evening. While it is unlikely to find anything "new" on 20, it's always interesting to tune the band and hear Central Asian stations coming in with those weak, watery signals with Auroral flutter. The past several evenings have provided QSOs with the "Stans," those parts of Asiatic Russia buried deep in Siberia, and the occasional JT or VU. Even in these screwed up times, DX IS!

73,

Mike WØVTT

(with apologies to Garrison Keiellor and Hugh Cassidy WA6AUD)

Do you have a story idea for the Gray Line Report? No writing necessary! Just contact one of the staff with your suggestion:

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Al Dewey, KØAD, aldewey@aol.com
Mark Johns, KØJM, k0jm@amsat.org

Join TCDXA

Our mission is to raise *Dollars for DX*, used to help fund qualified DXpeditions.

Our funds come from annual member contributions (dues) and other donations.

TCDXA is a non-profit organization, as described in Section 501 (c) (3) of the Internal Revenue Code. All contributions from U.S. residents are tax-deductible.

Becoming a member is easy. Go to http://tcdxa.org/ and follow the instructions on the home page.

All contributions (including annual dues) may now be paid on our secure site, using PayPal or credit card.

TOP LINE SUMMARY

TCDXA OPERATING BUDGET FY 2020
(Sep 2019 - Aug 2020)

September 8, 2020

INCOME		ACTUAL	BUDGET	Actual 2019
Surplus from FY 2019 (balance 8/31/2019)		**5291.41**		*2945.79*
Member Dues 2020 by Cash/Checks/PayPal		4406.11	4500.00	*5219.28*
Door Prize Ticket Sales club share		443.00	500.00	*602.00*
Donatons (estates, wills, etc.)		488.70	0.00	*0.00*
Refunds and Reversals		0.00	0.00	*2400.00*
TOTAL INCOME		**10629.22**	**5000.00**	*11167.07*
EXPENSES			**BUDGET**	*Actual 2019*
Member Recruitment/Retention		(160.96)	(150.00)	*(35.00)*
Website ISP & Domain Name		(130.69)	(150.00)	*(84.69)*
Office Supplies, Miscellaneous expenses		(25.00)	(50.00)	*0.00*
Flowers <SK> and Hospital gifts		0.00	(200.00)	*0.00*
Holiday Party Dec 2019		(386.67)	(500.00)	*(425.73)*
ARRL Spectrum Defense Fund		0.00	(250.00)	*(250.00)*
NCDXF Donation		0.00	(250.00)	*(250.00)*
MWA Plaque		(75.00)	(75.00)	*(75.00)*
DXpedition Contributions Total		(250.00)	(4000.00)	*(4755.24)*
#1 Dxpedition - W8S Swains Island	(250.00)			
#2 Dxpedition -	0.00			
#3 DXpedition -	0.00			
#4 Dxpedition -	0.00			
#5 Dxpedition -	0.00			
#6 Dxpedition -	0.00			
#7 Dxpedition -	0.00			
#8 Dxpedition -	0.00			
#9 Dxpedition -	0.00			
#10 Dxpedition -	0.00			
TOTAL EXPENSES		**(1028.32)**	**(5625.00)**	*(5875.66)*
NET		**9600.90**	**-625.00**	
Checking balance		**9475.60**		
PayPal balance		**48.30**		
Cash / Checks on Hand		**77.00**		
NET BALANCE		**9600.90**		

When required, Wells Fargo & PayPal online statements can provide detail not shown in this report.

Backscatter

Collected by Mark Johns, KØJM

FST4

Joe Taylor and team have announced a new family of digital modes which they are calling FST4. This new family of modes will be available in the next beta release of WSJT-X, 2.3.3. Target applications include:

- WSPR-like, quasi-beacon transmissions on LF and MF bands
- QSOs with very weak signals on the LF and MF bands
- EME on VHF and UHF bands with T/R sequences both shorter and longer than 60 seconds

FST4 uses GFSK (Gaussian frequency-shift keying) modulation and has T/R sequences of 15, 30, 60, 120, 300, 900 and 1800 seconds. Yes, 1800 seconds or a 30 minute T/R sequence! And you thought JT65 was slow? For details see: https://jl1jvt.cocolog-nifty.com/blog/files/fst4_quick_start.pdf

Solar cycle 25

We are at the beginning of sunspot cycle 25. It will peak somewhere between late 2023 and early 2025. For the last several years, many sun-watchers have worried about the sun entering into a Maunder Minimum or a prolonged sunspot minimum. The last Maunder Minimum occurred from 1672 to 1699 when fewer than 50 sunspots were observed. During a typical 25 year period in modern times, 40,000 to 50,000 sunspots are observed. The latest predictions from NASA and other sun watchers are not forecasting a prolonged minimum. Latest forecasts are that cycle 25 will be similar to cycle 24. https://www.nasa.gov/msfcsolar

DXCC Rule Change?

The ARRL is considering changes that will significantly affect remote operating for use in earning DXCC credits. I know that there are widely divergent feelings about using remote stations but, as we age, more and more of us will be using remote station if we stay on the air. For more detail, see: https://bit.ly/3jZHCER

FCC Proposes License Fees

Amateur radio licensees would pay a $50 fee for each amateur radio license application if the FCC adopts rules it proposed last month. Included in the FCC's fee proposal are applications for new licenses, renewal and upgrades to existing licenses, and vanity call sign requests. Comments are being accepted on the Notice of Proposed Rulemaking (NPRM) in MD Docket 20-270 by using the FCC's Electronic Comment Filing System at https://www.fcc.gov/ecfs/filings