

# Gray Line Report

June 2022



**The CW Machine  
Using a Mag Loop  
Member Profile  
Antenna Projects  
Dayton 2022  
... and more!**



**Minnesota**

**Newsletter of the  
Twin City DX  
Association  
[www.tcdxa.org](http://www.tcdxa.org)**



## 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

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### *On the cover...*

It's possible that his KX3 is packed into the gear on KØPX's bike! *See page 9.*

Gray Line Staff...  
WØJMP  
KØAD  
KØJM  
WAØMHJ  
WØZF

**To join TCDXA, go to**

**<http://tcdxa.org/>**

# The CW Receiving Machine

By Ralph Fedor., KØIR



Decades ago I purchased a new accessory for my ham shack called the CW Sending Machine. It was a marvelous piece of equipment. You pushed a button on it to send a CQ; another to send your name, QTH, and other information you wanted in your QSO; another for contest exchanges; and so on. Numerous upgrades and improvements occurred in the following years and continue in today's contest and logging programs. There is also a CW Receiving Machine. It has unimaginable capabilities and has not required any upgrades or modifications for at least 5,000 years.

This marvelous device is surrounded by a cushion of membranes, a thin layer of fluid and a hard protective case. It's only visible components are our external ears, which are designed to capture sound in our environment and channel it into our external auditory canal and on to our tympanic membrane (eardrum). The brain contains more than ten trillion junctions and functions 24 hours a day to keep you alive, breathing, warm, in pH balance and provide you with both short and long term memory. Its outputs control our external and internal muscles, allow us to speak, keep us in balance, regulate our heart rate and blood pressure, coordinate problem solving, and manifest themselves in our social behavior and emotions. The brain's inputs allow us to visualize the world around us, experience touch, taste foods, smell, determine body position, and most important to us in this discussion; hear auditory stimuli and understand language by assembling the components of syllables and words.

There are 44 discrete sounds in the English language. We call each of these discrete components a phoneme. Consider a phoneme to be one "bit" of information. The word "dog" has three phonemes: *dah - au - ga*. The number of possible combinations of the 44 phonemes is  $2.658 \times 10^{54}$ . The longest word that I could find in the English language is *Pneumonoultramicroscopicsilicovolcanoconiosis*, a lung disease caused by the inhalation of quartz or silica particles. The word contains 27 syllables, and by my count, 39 phonemes. So, if this is our longest word, then our brain needs to be able to deal with at least  $2.04 \times 10^{46}$  possible phoneme combinations. This is the awe-inspiring power of our brain that permits our understanding of language.

By comparison CW consists of just two "bits", a dit and a dah, which we combine to form letters, syllables and words. Just as we send phonemes to our brain for processing, we likewise

send CW to it. But the level of complexity in assembling CW input into meaningful information is many, many orders of magnitude less than assembling and understanding language.

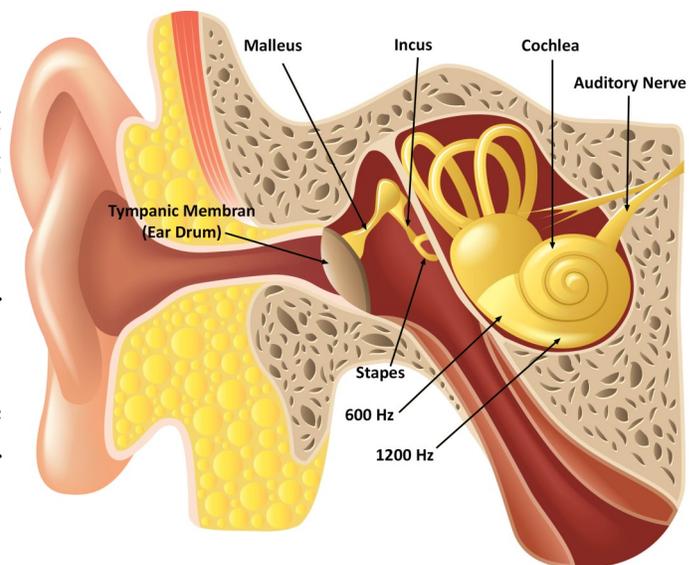
Now, let's introduce some sound: A 600 Hz tone that is 600 msec. in length, a pause of 600 msec, four 600 Hz tones each 200 msec in length and spaced by 200 msec., another pause of 600 msec., and finally a single 600 Hz tone of 200 msec. duration. This is six bits of information and the letters; T, H, and E.

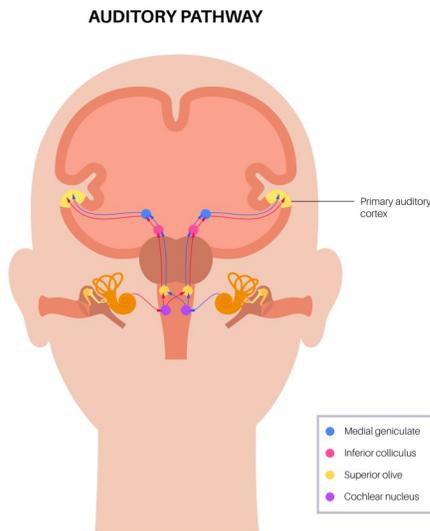
When each of these sounds occurred, your tympanic membrane vibrated at, you guessed it, 600Hz. On the inside of our tympanic membrane there is an attachment to a small bone called the malleus. It picks up the vibrations and through articulations, passes them on to two other bones, the incus and stapes. As a point of interest, and for your next trivia game, the stapes is the smallest bone in the human body. Everything up to this point has been conductive. Our 600 Hz tones are about to leave the middle ear chamber, enter the inner ear, and switch to fluid hydraulics and neurosensory mechanisms to convey their information.

The dominant structures of the inner ear are the cochlea and vestibular systems. The vestibular system (semicircular canals) have to do with balance and sensing acceleration. Our 600 Hz tones have little to do with this system, so we'll ignore this anatomy and physiology for now. The cochlea, where the action is, is a closed, fluid filled, snail-shaped chamber lined with tiny, hair like cells called the organ of Corti. This cochlea is tonographically mapped with low frequency sound stimulating receptors near the base of the cochlea and high frequency sound stimulating receptors near its apex.

The stapes is fixed to a membrane over an oval opening in the cochlea and acts like a hydraulic piston sending 600 Hz shock waves through the cochlear fluid. This causes a membrane separating two chambers of the cochlear to ripple like a rope being snapped. The movement stimulates the hair cells of the Organ of Corti that are sensitive a frequency of 600 Hz and they in turn stimulate the auditory nerve.

Fibers of the auditory nerve sense the vibrations of the organ of Corti and send electrical impulses along neurons by sodium, potassium, calcium, and chloride ions moving across electrical and concentration gradients at nerve cell membranes. Chemical neurotransmitters relay the impulses between neurons as our 600Hz bits make their way to our brainstem. Along the way the neurons encounter several nuclei which process and relay information, and importantly, send nerve fibers to the opposite side of the brainstem. Therefore, information from both ears



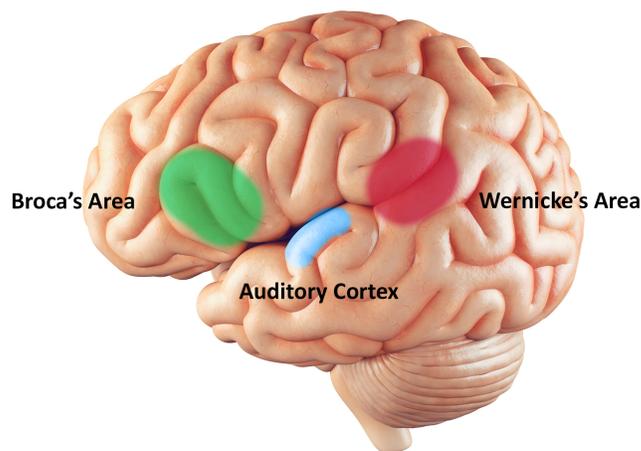


**The cochlea is filled with a fluid that moves in response to the vibrations from the oval window.** As the fluid moves, 25,000 nerve endings are set into motion. These nerve endings transform the vibrations into electrical impulses that then travel along the eighth cranial nerve (auditory nerve) to the brain.

**Sound waves strike the eardrum, causing it to vibrate (like a drum) and changing the acoustic energy into mechanical energy.** The malleus (bone), which is attached to the eardrum, starts the ossicles into motion. The stapes moves like a piston in the oval window of the cochlea creating a mechanical-hydraulic energy.

reaches both sides of our brain. This route and process is not unique to our 600 Hz tones. All sound: CW, music, background noise, and language behave in exactly the same manner.

The nuclei in the brainstem act like internet or network nodes, sorting and directing information flowing to them from the auditory nerve. They also send some nerve fibers from each auditory nerve to the opposite side. This is a backup system and assists in sound localization. After the last nucleus, our 600 Hz tones are on their way to the CPU of our CW Receiving Machine, our brain.



The auditory cortex of the temporal lobes of our brain collects all the input from the auditory nerve and tonographically sorts it. All the phenomes and the dits and dahs are then relayed to Wernicke's area, just posterior to the auditory cortex. This is an assembly area where the input is decoded and enters our consciousness. We "hear" sound and now make sense of what we hear. Just as we instantaneously hear and understand words, we "should" instantaneously hear and understand CW characters. Just as we fuse phonemes to create syllables and words, our brain is capable of creating syllables and words from CW characters.

Once recognized and brought into consciousness, this CW information is relayed to other areas of the brain as necessary. For example, if we wish to speak the letter we received, information is sent to Broca's area, the speech center, and we speak the letter. If we wish to type the letter, our motor cortex is stimulated to engage our fingers. Or, a CW phase may be sent to our short

term memory, or if we judge the information to be really important, it may go into our long term memory center.

This is how our brains are wired. The entire capacity of our brain can handle 11 million bits of information per second. Our conscious mind, that part of the brain with which we hear language, can deal with 40 to 60 bits per second. We learn language by assimilating information from our environment and by being taught — nature and nurture. However, we only learn CW by being taught. How we are taught is therefore critically important. Practice is important to learning both language and learning CW and it is optimal if we start with a blank slate with no old, erroneous methods cluttering up our auditory cortex or Wernicke's area.

A toddler's language develops by fusing phenomes and syllables. When these become fused into words, this is the turning point in the comprehension of language. The "phenomes" of CW are dits and dahs. They need to be fed into the brain as meaningful, discrete bundles representing letters. The bundles should not be dismantled and then consciously reassembled, rather they must erupt into our consciousness without a voluntary effort on our part. When we hear the word (sound), "balloon," we instantly recognize this discrete bundle of sound and know what it represents. To duplicate the way we learn language, we need to tell the student, "This **sound** represents the letter \_\_\_\_." Focus on the sound rather than its composition.

As in language, when we begin to fuse the sounds of letters into words, we have reached the turning point and have an impedance match with the wiring of our brain. If this is true we should be able to decode CW at a rate similar to that with which we can decode language, 40 to 60 bits per second. Let's put this to the test.

At the 2019 ITU CW competition, two individuals copied code at 195 words per minute. If we use the word "Paris" as a standard five-letter word, made up of 14 bits, 195 words per minute equates to 2,730 bits per minute or 45.5 bits per second. It correlates!

Can everyone learn CW? No.

There is a condition known as auditory dyslexia. Individuals with this problem may hear sounds but are unable to interpret them. They may decode sounds out of sequence or need constant repetition of instructions. The condition is most often discovered in childhood.

There are also multiple forms of aphasia. Most are the result of a stroke or trauma, and may leave the affected individual unable to understand, speak, read or comprehend. Since hearing is a bilateral process and we have those cross-over areas, hearing is seldom compromised.

However, if you are able to read this article, understand normal speech, speak normally, and follow instructions; then your CW Receiving Machine is likely in good condition, and with the proper teaching methods and practice, you can master CW.





## There Really is Ham Radio after Downsizing

*By Harry Cohen, KØVZT*

**Ham Radio Operators are an aging community** whether we like to admit it or not. At some point during this aging process, we are faced with what do we do with our home and all of our possessions including our ham radio equipment and other stuff that we have accumulated over many years. Many people say I will do nothing and after I (we) pass, let the kids do what they want with everything. I really don't think most kids want that responsibility. In the case of my wife and myself, after living in our last house for 45 years, we decided it was time to sell our house and downsize. It was time to donate, sell and otherwise dispose of our unwanted possessions. A lot of the radio equipment was donated to a local radio club. That's when the thought of losing my life long ham radio hobby really hit me.

I was licensed in 1959 as KØVZT. During the last 63 years, I have held this callsign and for the most part have operated HF continuously from home and many parts of the world. Downsizing meant no more tower, beam or wire antennas. In effect, no more ham radio operating with the equipment I have. The option of operating through a remote “timeshare” station didn’t appeal to me. I was finally resigned to the fact that my HF ham radio days were over and it’s time to find a new hobby. Although there is nothing wrong with stamp or coin collecting, that wasn’t for me.

In October 2021, we moved to a two bedroom second-floor apartment in Golden Valley. One day after getting settled in, I was sitting at my operating table staring out through the patio door wondering what kind of stealth antenna I could put on my 12 by 7-foot piece of real estate known as a balcony. On the operating table was the Flex 6400M, Elecraft KX3 and other miscellaneous pieces of radio equipment waiting to be operational again. The HOA documentation stated no antennas or wires attached to the balcony along with the usual no towels or clothes hanging over the railing. Things were not looking good in addition there was no access hole in the wall or patio door for the coax.

After much thought and research, I determined the only way to get back on HF was with a magnetic loop. It has a small footprint and it is fairly efficient. Most magnetic loops are designed for QRP power levels. The two main requirements of the loop were remote tuning (so I wouldn’t have to go outside every time I changed bands) and higher than QRP power rating. The higher power rating was necessary because at some point in the future when I felt brave, I could experiment to see how much power I could really run without causing interference issues. Higher power magnetic loop antennas are quite ex-

pensive and there are only a few commercially built models available. I started checking the local swap nets and to my surprise, an MFJ 1786, 100-watt loop showed up for sale at a very reasonable price. Inspecting the loop, it appeared to be new with all mounting hardware, remote control tuning box and original packaging. Guess I was at the right place at the right time.

The loop is mounted on a photographic light head tripod on the balcony. All tuning control for the loop is through the coax so the installation is clean. It was October and still warm outside so I could leave the patio door cracked open a half inch to allow for the coax to run outside. When not operating, the coax was pulled inside and the door was closed. Being in Minnesota with cold and snow coming soon, this was not an ideal situation. Getting the coax through the patio door was solved by putting a rubber spacer/seal between the patio door and the door jamb. Being in a residential setting with many neighbors, my fear was causing interference to smoke alarms and various appliances. I didn’t want the “air fryer” in an adjacent apartment following my CW pattern. At this point I have limited my power to 15 watts and have not had any complaints. Guess I’ve come full circle, as a novice I started with QRP 63 years ago and now QRP again.

I’ve been using the magnetic loop for about four months and have never looked back. Running 15 watts on FT8 and CW, the loop has far exceeded my expectations with over a 100 countries worked on 10 through 30 meters. There are challenges, the loop doesn’t hear as well as my Hy-Gain TH7 did, but there is nothing wrong with being second best and I got to keep my hobby. To overcome the HOA antenna issue, when asked what that thing is on my balcony, I tell the person asking, it’s a “sculpture.” 



## Member Profile — Doug Arntson, KØPX

I guess I am a little overdue on my introduction in the *Gray Line*. I joined the TCDXA in 1996. Over the years, I have held the offices within the TCXDA of Director, Secretary, and President. I love what this club does to promote DXing, and I also love the meetings with everyone in person. Here is a little about me and my ham radio journey.

### In the beginning...

My ham radio addiction started when I was a sophomore at Robbinsdale High School... a few miles from our meeting place here at Pub 42. I was taking an electronics class and Elmo, KØGRA, made a visit to see if anyone was interested in ham radio. I always had an interest, but was never exposed to the hobby. Elmo became my Elmer, and I got my Novice ticket in 1972, WNØHRX. Elmo was a member of the Robbinsdale Radio Club which I soon joined. I really enjoyed the new group of friends, hanging out, and playing radios with them.

For some reason, I waited until I got my Novice ticket in the mail (which seemed like forever) to order my new Heathkit HW-16. Later thinking about that, waiting was not a smart

move since I only had a year to get my General ticket or lose my novice privileges. I received my new rig, put it together, and was on the air soon after that. Back then, we were crystal bound and could only afford a couple of crystals that would work both on 15 and 40 meters. I have fond memories of riding my bike downtown to ECI and looking through the box of crystals along with seeing the new Collins and Drake rigs on display. I had a dipole antenna next to the rain gutters of my parents' home, but needless to say, it worked terribly. I soon upgraded to a Hy-Gain 18AVT vertical antenna mounted on the roof with radials. I still remember the HW-16 had the capability of 90 watts, but the power meter had a marking for 75 watts, the legal limit for a Novice. I never went above the 75 watts assuming that the FCC truck was driving around Robbinsdale waiting for me to exceed my legal limit....lol

Six months later, I passed my General license upgrading my call to WBØHRX. I immediately bought a used Heathkit SB-101, which I still have to this day. Next, I put up a 40 foot tower with a Mosley TA-33 tri-



## **I realized my dream of owning my own place with a ham shack**

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bander, and later I bought a new Heathkit SB-200 amplifier. Working DX was now much easier! I also spent time phone patching my good friend Barry, WB0FBN, who was in the army stationed in Seattle. Long distance phone calls to family back then were incredibly expensive.

### **My first real shack of my own ...**

After high school, I went to Anoka Ramsey and received a two-year electronic technician degree and started at Rosemount, Inc. in the fall of '76. In 1978, I upgraded to Advanced and Extra and reluctantly kept my call (It was not until 1996 I changed it to KØPX). A few years later, in 1981, I went looking for homes in the St. Louis Park area. I realized my dream of owning my own place with a ham shack rather than operating in the basement of my parents' home. The home I bought had 2 bedrooms on a huge lot on a hill. My realtor said immediately, "You don't want to buy a house on a hill like that." I said, "YES, I do." I put up a 40-foot tower, a HY Gain TH7DX, a 4 el 6 meter yagi up another 10 feet, and a set of phased



**Here is my shack in my parents' basement in 1976.**

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## **I had an awesome station and a great bachelor pad**

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slopers off the tower for 40 meters. I really was into Heathkit and owned pretty much all the SB series they sold. I had an awesome station and a great bachelor pad. Some really fun years!

### **Time to settle down and move ...**

I was going to the UofM night school 4 nights a week to get my BSEE, and graduated in 1984. During this time, I met Rachel, and we got married in 1985. We then decided to move off this hill. I bought 1.5 acres in Corcoran, and I built a log home with plenty of space. When the cement work was being done, I poured the base for a Rohn 56 foot tower for my TH7DX and a 2 el 40 Meter yagi. Things were better in my new QTH, but with work and 3 kids, ham radio slowed down a lot in my 30s and 40s. I was never QRT, but my activity was sporadic. I always seemed to miss the good sun spot cycles.

### **Time for a new tower!...**

I was in "Radio Free Corcoran" for several years until one day I met my neighbor on the air who happened to only live two doors down that had just moved in, Steve, KØSF.

Long story short, he wanted help putting up his tower, so I decided to put up a new tower at the same time with his help as well. I went with 90 Feet of Rohn 55g. I used my same TH7 and 2 el 40 antennas on top.

That system worked well for several years, but I was convinced by KØSF and KØKX to rotate our towers. So, off we went, and we all bought the rotating rings from KØXG. It took me 10 years to install mine. I chose to design and fabricate my own low profile base so that I would not have to take my tower down for the conversion. I devised a system and jacked my tower up and inserted the rotating base. I did an article about that in the March 2012 *Gray*



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## **I was convinced to rotate the tower**

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*Line Report* (<https://tcdxa.org/wp-content/docs/Newsletters/Mar2012GrayLine.pdf>  
[newsletter](#)). In years prior, I bought several Force 12 Antennas from Jim, KØJUH, in preparation for the tower project. I now have at 100 feet a 2 el 30/40, at 90 feet 6 el 20M, and at 60 feet 10/12/15/17 multi-band. The system has worked flawlessly since then. With the changing of the antennas, I installed two runs of 1.5 inch hardline buried out to the tower and smaller runs of hardline up the tower to feed the antennas that are switched at the base. I use the second run of hardline for my vertical in the swamp for 80 meters. I currently don't have 6m and 160m antennas, but it is something I would like to do next year.



## Radios, radios, and more radios....

Like most club members, changing radio equipment frequently happens. I was operating a pile of old Heathkit radios until the mid '90s, when I bought a 32S3A/75S3C Collins S-line followed shortly by the Drake C-Line. I have always liked the old tube equipment. It was not until 2000 I bought a used Yaesu FT1000D from Larry, WØPR. What an amazing radio, I thought, compared to what I had been using... With dual receivers, what more would I ever want ??? I also got rid of my SB220 amp and bought a



QRO amp from Jeff May, WØXV. However, 20 years later, I started doing a bit of traveling in the winter months and bought a Yaesu FTDX10 for use in my RV. Never having a radio with a spectrum analyzer, I was hooked. Because of the DX10 performance, I just recently purchased a Yaesu FTDX101MP to replace my 1000D. This radio blows me away.

## What I really do with this hobby ...

I operate 99.9% CW and mostly chase DX. I am not a contester, but I do operate contests for fun and chase band countries. Currently I have around 275 countries con-



**I recently purchased a Yaesu FTDX101MP – this radio blows me away!**

firmed. What I do enjoy about this hobby is the building, repairing, and collecting of old radios. I have a vintage station that consists of a Collins 75A4 and a Johnson Ranger.

I also collect many of the CW novice transmitters as well, such as AT-1, DX20, Johnson Adventurer, Globe Chief 90, and Drake 2NT.



**I have a vintage station that consists of a Collins 75A4 and a Johnson Ranger**

## Life besides Ham Radio...

I retired from Rosemount in 2015 after a great 38 year career designing aerospace and industrial instrumentation. I have been enjoying retirement with my wife Rachel ever since. I do still keep busy with a side business I run in my garage, powdercoating. ([www.PowderCoatMan.com](http://www.PowderCoatMan.com)) Several of the club members have had me powdercoat their amplifier enclosures.



## I am really into old Fords

As much as I am into ham radio, I have two other hobbies that consume my time as well. That would be bicycling and vintage cars.

I have ridden my bike across the U.S. twice and tens of thousands of miles on other trips in the U.S. as well as in Europe over the last 45 years. I am doing another trip across the US this spring from California to Florida. At 65, this may be my last big trip.

I am really into old Fords. Currently, I have 7 classics that keep me busy. My favorites are my 36 Ford 3 window coupe and my 32 Ford roadster. I do all the fabricating, welding, and painting in my shop. It's a great hobby when the bands are dead.





## New House and New Tower

*By Erika Ostlund, KØDD*

**My husband Craig and I moved** into our beautiful Victorian Manor September 20, 2016. I'm enjoying making this house a home for us. I'm always formulating "The Master Plan" for our spacious city lot with a very big house "In Hams Way." The official deal with my husband is I can attempt whatever radio I desire: Leaving nothing to trip on, hang himself on, get in the way of mowing, shoveling, or snow blowing.

I have a vision on how to nurture "Ostlund Manor" well into the 21st century while maintaining most of her 19th century charm. Here's the Parlor [*see next page*] the day I finished removing the Carpet, padding and millions of wire staples used to hold the carpet pad down with pliers. We were amazed at the condition of the original hardwood floors!

### **THE TOWER PURCHASE:**

June 27, 2020: After months of watching eBay, QTH, QRZ, eHam, Craigslist, and Marketplace just barely missing a couple very desirable towers, a used 100' Rohn SSV appeared on one of the fore-mentioned sites at a price I could tolerate. A quick call to My Hubby Dearest at



## **The Parlor the day I finished removing the carpet**

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work granted me the "Go Ahead" to buy the tower. That single act set to motion the next 4-1/2 months of my daily life. The tower was located in IOWA, though straight east on HWY 9 all the way across the state until just short of a giant splash in the Mississippi.

From a handful of pitifully poor photographs I was able to determine most of the basic tower details. It was a 100-foot Rohn SSV with a 7N and 6N sections still assembled and bolted to each other in tall grass. A 5N and 4N assembled though separated in even taller grass, next to some sort of 3W section with a tapered top and a pair of large side arms still attached mostly totally hidden in the grass. I surmised this tower had large VHF or UHF antennas on it before being taken down.

The owner in fact owned a crane business. The tower was used in his business and had to be taken down as he had lost lease to the property it was erected on. He originally had planned to reinstall the thing. The story and the unconfirmable details were inconsequential to my needs as long as the tower

wasn't damaged. My original thought was to extract the tower within 30 days. Considerable preparations had to be performed on our end. Craig preferred to extract the thing over the upcoming 4th of July weekend, to avoid needing to use vacation time from work.

(Note: Craig is a cabinet maker and they are VERY busy.)

## **A Week of Truck and Trailer Preparation**

June 28, 2020: The day after making the purchase, we found ourselves buying a solid bar hitch, massive ball, brake controller with all the fancy plug in cables for the controller, and four 18 wheeler style tie down straps for the extraction. \$\$\$ KERCHING \$\$\$... Then we head to the equipment rental company. I walked the long row of trailers to find the exact unit I desired by "Unit Number." I found a real beauty that looked as-new...

June 29, 2020 - July 2, 2020: First thing Monday I returned to RentAll to make the reservation for a week starting July 1st. Wednesday 10:45AM I was back to pick up the trailer. I was very impressed with my 2018 F-150's 5 liter Coyote engine powered pickup's first towing experience. It towed wonderfully, presented decent gas mileage and decent uphill towing ability. Big Trailer would become 2500 pounds FATTER with tower steel aboard. The brake controller worked as designed.

Further prep, I figured we'd be living in grass to my eyebrows for two days or more, working harder than both Craig and I ever had! This wasn't my first tower extraction rodeo, but this time I didn't have multiple

guys along, or mechanical advantage available. So in preparation I loaded up every tower tool and every piece of tower gear I owned including safety belts, a pair of ladders, wood blocks and my motorcycle tie straps.

For survival, sun block, hats, change of clothes, weather gear and bug spray. Our big cooler stuffed full with bottled water. That night I even sent Craig to the grocery to buy a big bag of ice! This operation would become a test of summer survival as well as a tower disassembly and extraction mission. We'd be pulling apart those huge sections where they lay and lifting very heavy pieces by hand onto the trailer.

### **TOWER RESCUE & RELOCATION MISSION:**

July 3, 2020: I had been working all week at warp speed getting the truck loaded and trailer ready to go. We hit the hay really early July 2 with the alarm set for 3:00AM. Instead I awoke a bit after 1:00AM! Not to lie in bed and contemplate what we'd be doing in 2 hours, I sprung to action performing the



**Big Trailer would become 2500 pounds FATTER with tower steel aboard**

final house shut down, started the truck, and aimed it out the driveway from where it was parked across the front yard. I then loaded all the bags, and then woke Craig. I then fumbled with my phone and Google Maps, getting that playing on my radio system's LCD! Gots to have MODERN TECH right? At 1:30AM we were rolling heading east on HWY 9.

Several miles out of town I remembered we had a giant ice bag for the cooler in the freezer. Smart Huh?

We arrived at the tower location just about 7:30AM. We were overjoyed to be greeted by the tower owner. He had a huge John Deere with a fork lift front, PLUS a Bobcat with forks! Our couple day long disassembly adventure nightmare was just reduced to THREE HOURS! The owner had previously separated the sections and moved them to his company's concrete staging area. All we needed to do is remove the two antenna sidearms, tapered top section, and load! It still wasn't that easy but the gentleman on the bobcat made lifting the heavy sections much easier! The toughest part, as we weren't disassembling the sections is we had to slide them assembled together and hang the two middle sections on either side of the large ones. We rounded out the event by stuffing the 3W inside the 7N/6N combo and strapping them down.

Complete turn and burn! Go west old gal; I was home asleep by 4:30 PM! The good news, we would be performing disassembly and unloading at home! We could pace ourselves as I had the trailer until



## **That's quite the pile of steel!**

Wednesday at 11:00 and we still had Saturday and Sunday with Craig at home. That's quite the pile of steel, no?

July 4, 2020: Refreshed, full of vim and vigor, I was outside O-Dark Thirty wrenches and bucket in hand. I was pulling bolts from the 4N until Craig joined the party around 8AM. The first thing we attempted together was removing the 3W section from the middle of the stack. That 3WNST section weighs an estimated 250# and I was holding it up and pulling on an increasing load as I walked backwards dragging it out of the 6N section's center while Craig aligned it with a pry bar to slide out across all the bigger sections' braces. Just as we got it to the back of the trailer, I had backed about 18 of 20' to a slight rise in the yard. I then slipped on the grass with the section landing on my foot pinning me to the ground... It took a second for the shock to register, Next I'm Screaming "ITS ON MY FOOT, ITS ON MY FOOT - GET IT OFF!!!" Fortunately the only thing broken was my pride.

I gimped around for a while until the neighbor stopped over and took my place on

the section. I then returned to removing bolts on the 4N section's braces with Craig removing the Pal Nuts ahead of me. It was brutal; there were 72 bolts holding the braces on each of the 4N and 5N sections. The neighbor kept checking in with us as we went, and joined us to assist lifting each section's leg off of the braces while I pulled the last four bolts like pins. Once the 3WNST and 4N were unloaded, we spent the rest of the day driving to Tractor Supply in Sioux Falls for their "4th of July Sale". I bought myself an IMPACT DRIVER! Using one of those would really speed the operation!

July 5, 2020: 6:00AM: Back to work. Using Craig's big basement installed 5HP 60 gallon compressor and my new impact driver, I made mince meat of those 5N, 6N and 7N section bolts. Craig working ahead of me with a wrench removing Pal Nuts... I don't know who assembled this tower the first time, but all the Pal Nuts were installed backwards. Tightening them down that way bent the stamped nuts making getting a wrench on them difficult. We had SAE, Metric and Adjustable Wrenches so Craig could get "something" to fit each mutilated nut. It still took until afternoon to pull those three sections apart. The guys organized rows of tower parts across the yard as we went. The sections look far less imposing once broken down into individual pieces. If you add things up, each one of those legs run 125-150#; Cross-Braces can only be comfortably moved a few at a time. What makes an SSV such a desirable tower, are the top sections are all solid steel legs and braces. The 6N and larger sections to 16N

(320' tall tower), are pipe and angle to over 24' wide at the base!

July 6, 2020: I returned the Trailer... Once home, I moved the angle braces into the shed. Just one brace getting stolen would probably cost as much to replace as a complete section!

### **Building Permit Preparation:**

Not knowing when or if we'd even be installing the tower this year, I received a preliminary replacement parts quote from ROHN TOWERS. Tried to think of everything I'd need money for to erect the tower, trailers, parts, concrete, and cranes. I decided not to order the parts until I actually had a building permit in hand; smart move too! I was trying to decide which configuration the SSV was going up in. The nice thing about SSV's is they're completely scalable using standard components. What I'm saying is there are configurations using my five sections for any height and wind loading between 20' and 100'. The tower I loved and wanted personally was a friend's now (SK), 80' tall 7N-6N-5N-4N, but I was getting a lot of pressure FROM THE GUYS I grew up with, to go all the way to 100 feet. You own it-You use it!

### **Doing the math!**

For any obstruction, (a tower IS AN OBSTRUCTION), there are a collection of hoops an applicant must jump through to be able to declare My Tower doesn't need restricted. A 100 foot tower could be located where my tower is depending on the complexity of the AIRPORT involved. We have a

small Municipal Airport with a short runway with displaced thresholds on each end. Making sure I was good to go would be a major factor in defending the tower with the city fathers.

I ran all the numbers calculating the maximum height for the planned location. It turns out our house is 1.21 miles right off the southern end of the only runway of the Rock Rapids Airport. Being a HAM and an EX-Airline Pilot, I know all about runway clearances. Hams may go right up to 200' without FAA spec lighting and red/white painting if they're outside of 5 miles of an airport.

**For any obstruction, (a tower IS AN OBSTRUCTION), there are a collection of hoops an applicant must jump through to be able to declare My Tower doesn't need restricted.**

July 15, 2020: I called the City Administrator and discussed the 100' project. He sent an email with a Building Permit Application to start the process. Just down the block from the city offices sits the Lyon County Courthouse, alongside the building, is an SSV! That tower is a 6N thru 1W 120' tower only holding UHF antennas. My tower is just like that one, same brand, but more heavy duty, one section bigger on the bottom and it ends without the two upper small lightweight sections at the top. SO it is shorter and stronger. The County Tower has been there a long time, they do know what one looks like and the city has a history with ROHN SSV Tower.

After all the number crunching, GPS coordinate locating; I calculated legally I could go 127' without contacting the FAA for a construction permit. So with a 100 foot of tower, plus a 12 foot mast protruding, I'd be 15 feet below the max. Talking with my neighbor, the city Administrator and one of the City Councilmen that I knew wasn't providing me with warm fuzzy feelings about a BIG 100 footer on our city lot. The neighbor has assisted a lot moving this thing around, but when he was looking at that 7N section the first day he was like WOW that thing's huge... If you really listen when talking to people you can surmise what they're truly thinking but not saying.

**The eventual plan was for only a 60' tall tower plus a mast.**

After I laid out the first base for the 7N section where it would need to go, I was thinking, Geez this leaves us with no backyard at all and we've been planning to enlarge the garage considerably! Craig took one look at the stakes I had pounded and put the kibosh to my dream instantly. The concrete base was huge and it would have taken up most of our remaining yard. We then decided right then to move it up next to the house, and shorten the tower to 60 feet using the thinner three sections 5N-4N-3WNST, pretty much the same tower I had in Sioux Falls. I go, Hun, why don't you give our neighbor the good news and see what he says?

First, where exactly is our property located? I placed a call to the engineering company that most people use for lot surveys here. A few days later I had our boundary pins

marked. Turns out somebody HAD a previous survey but we didn't get a copy of that with our abstract. I pulled lines between stakes I drove next to the boundary pins to show the actual property lines. That gave me something to measure off with the 100 foot tape measure. After a couple days of work, I had all the numbers to draw a precision drawing of our property with the planned tower located with distances. The Building Permit Application was completed and delivered on August 4th. A couple days later I was over there paying the Utility Bill and I popped my head in on the City Side and talked to the lady who I had given the application to earlier. I really like being able to talk to these gals. Not only had we forgotten to give her the \$20 permit fee (for which she'd forgotten to ask), but in casual conversation she mentioned the Administrator had been very concerned over the height we were talking during our original tower discussion on July 15. With the system we finally applied for, most of the structure will be hidden behind our very tall trees.

August 15, 2020: It took me one full month to get the building permitting process planned and completed. The eventual plan was for only a 60' tall tower plus a mast. Now the really tough work needed to be done. I was required to contact IOWA ONE CALL to get my utilities marked. I ordered the ROHN PARTS for the tower and was given approximately a 4-5 week lead time plus shipping. I ordered the DXE mast and thrust bearing, cleaned up the Explorer 14 and assembled, bought a previously loved Tailtwister rotor, ordered coax, connectors,

and installation tools. The beat goes on! We had at least SIX WHOLE WEEKS but there were a lot of things that needed done in the meantime. I desired a time delay to dig the hole as I didn't want a muddy swimming pool leaking goo into the basement. At first we started preparing the section pieces for paint.



### **Dig Day Number 1: I got the first foot done, sort of.**

Craig sandblasted some; hand sanded others. I painted them all.

September 4, 2020: Dig Day Number 1. I got the first foot done sort of. I was digging through tree roots, rocks and multiple horrible obstacles, I was exhausted. There's nobody on earth that wanted to see that tower up with antennas functioning MORE than I DID! While it looked to others like obsession, from my point of view I knew I needed to pace myself, stay at it daily, and get it done. ALL before winter shut us down!

When we got news the Rohn parts were going to ship, we rented a baby excavator for a day and really went at it. I dug and Craig hauled the dirt to the far end of the lot. We really needed several more hours with the

steam shovel, but barely got it loaded and back to the rental company before closing. I then needed to dig by hand every single day during the next two weeks! I installed the concrete forms and mounted the base section securely in the hole to keep it from shifting during the pour and installed the cardboard on the house. Craig and I made the two rebar panels, installing one in the hole and made the other ready to place in the concrete in the top foot or so while we poured.

October 2, 2020: The Rohn Parts were nearby. I saved a day by picking them up in Sioux Falls myself. By the end of Sunday October 4, 2020, we were ready to pour.

October 5, 2020: The guys showed and trucks just kept coming. They used my tools, and went at it! I bought them cases of Mountain Dew and beer for their efforts.



### **I then needed to dig by hand every single day during the next two weeks!**

October 8, 2020: after the pour, the really hard part is waiting for the concrete to cure. This stuff has nearly every chemical available for quick set, fast hardening, and extra



**I bought them cases of Mountain Dew and beer for their efforts.**

strength concrete. Time was ticking along, and severe concern for winter weather was in the air.

After a few days I talked Craig and our neighbor into walking the 5N legs vertical and setting them on the base pads. That was a real adventure as they are 125# each and wiggly. The guys got them up and I put the section bolts in. That evening we installed FIVE lower braces on each side. Then over the next couple days I laced the rest of the section.

October 11, 2020: Section 1 is now up. I then cleaned up around the base, and spent the next couple days tightening brace bolts and installing PAL NUTS on each bolt. It looks great, but kind of short. I hadn't been climbing in years! Every day was an adventure and a serious workout. Just think I used to be able to rocket right up to 100' back in the 80's-90's.

October 19, 2020: We'd originally planned to lift each section from where they

were staged behind the garage using the crane, but the crane broke delaying our pick. With extra time I thought I'll save crane time by putting the two sections together and placing them where they'd be easy to grab. So Craig, the Neighbor and I went after the top section with our two wheeler secured to the bottom brought it around and placed it here with blocks under it. While the neighbor was home for dinner I placed the two wheeler under the 4N section and started pushing it over behind the top section using blocks and boards under the top end! Craig joined in and we secured the two together



**Section 1 is now up.**



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**I went after the top section and placed it with blocks under it.**

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ready for tower erection. The rotor cable is installed and coax ready under the top plate, the tails coiled in the bottom of the 4N section to be unleashed once the sections are all bolted together.

October 21, 2020: A huge day at Ostlund Manor. After a 5 day technical Crane delay, I spent from 8:30AM to 11:30AM outside getting the last bits of preparation completed before the CRANE arrived at noon. The Crane Operator and I lifted the top two sections in one pick. The tower was lifted from the 55' level to vertical and I walked it to 2' off the ground just in front of the Bottom section already installed by hand and laced. We then carefully raised it to the proper height over the bottom section; I then climbed to the 5N/4N junction with the section bolts and 1-1/8" wrenches. I proceeded with considerable difficulty to muscle the upper 1000# of tower into alignment to install the bolts.

Over the next week I'd managed to get the rotor cable and coax into the shack and terminated. As winter arrived with snow, on the next warm day the EX-14 will go UP! In the

meantime I built a sidearm bracket to support the 135' Doublet from 58'.

October 28, 2020: My ham friend Mark Franklin, KØKX, now living in Sioux Falls pulled the EX-14 up the tower where I wrestled it into position, aimed it north, tightened bolts, and hooked up coax. We then pulled the doublet's Sidearm up and I installed that on the NW side of the tower at about 58' on the house side.

October 30, 2020: My plan was to get the doublet pulled up the tower and into the Side Arm Pulleys. Then on the way down I tightened the rotor plate bolts, and lowered the rope and pulley to the ground and coiled



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**The tower was lifted from level to vertical**

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up on its storage spool. Finally, I taped up the bottom coax and rotor cables to a tower leg and made a nice bundle to the entry hole into the house. The doublet's window line does exactly that, goes in a window straight to the tuner!

October 31, 2020: Today I performed additional busy work on the doublet tying the feedline to the tower with paracord in a couple spots to temporarily to keep it from flying away from the tower in the wind. It had been sailing away from the tower out over the house... I then readied candy bowls for trick or treaters if we would get any.

November 1, 2020: I checked the torque on the 5N-4N section bolts at the 20 foot level and then installed their PAL NUTS. If the Doublet feedline doesn't reach the shack I planned on doing an extension at that time. It was long enough; hooked up to the Johnson Matchbox the doublet tunes the whole band smoothly on 80 meters. 60 meters is touchy but tunes to 1:1. 40 meters is way beyond tuner range. 30 meters is all the way to the end but will tune. 12 meters tunes but sensitive and probably full of directional lobes.

November 5, 2020: I've been doing busy work tidying up the installation to get it solid for the winter season by building and installing the Doublet Feedline Mounts.

November 12, 2020 I still needed a plan to tune the doublet on 40 meters. Its impedance is almost 5000 Ohms and while 80 meters is perfect, my Johnson Matchbox can't handle that high of impedance on 40 meters. I had a devil of a time trying to get the 135' Doublet playing on 40M. One way to fudge

the system was to keep adding window line up into the 92' length. While that will convert the 4900 Ohms down to something the Johnson Tuner could handle, I really had no clean way to use every little chunk of line I had in house and stretch it between the house and garage and back. I didn't want the place to look crappy and non-professional. And it would have to be switched in and out for 80 meters. So I took the piece of window line I did have and made a 70' doublet and carried it up the tower. The only length I had was near 34 or so feet, a quarter wave on 40m as you might suspect that didn't work. I still have the cover off my #2 Johnson Matchbox, I had removed the relay and tried

**I've been doing busy work tidying up the installation to get it solid for the winter season**

whatever I had in house to get the little unit to play on 40m. With the November Phone Sweepstakes quickly approaching I was thinking, 40 is going to be a HUGE part of the Sweeps I better get something working! I was getting pretty frustrated.

November 20, 2020: Well time is up. I was desperate with the 70' doublet in a pile. I removed the window line, installed using ten thousand wraps of electrical tape the BN4000B that was supposed to go on either the 6M beam or the previously referred 17/12m duobander to fill the bands missing with an EXPLORER-14. I search through all of the coax I had. I did come up with two unrelated pieces of LMR400. One had originally fed that first G5RV that went up in No-

vember 2016. The 8 million turn coax balun unwound and washed in my sink provided me 40' of LMR400! Now, ON with a pair of crimp on PL259's. Months ago I had taken a 29' piece of new LMR400 I had in my coax stash and installed my very first PL259 crimp connectors; the combination, just short of 70' of coax! Back up the tower I went, I had left the paracord line that was pulled through the tower rungs at 40' to play with antennas. I chopped the antenna down to 66' and crimped the insulators back on the ends. Opened the window next to the rig and shoved the coax in. Pulled the end ropes back to the just over walk under height and tested. Yucky curve but signals were good. Sweeps is tomorrow.

**With AMAZONIAN DETERMINATION, I cast using my Antenna Tree Fishin' pole all the way over the front 75 foot tree with an amazing and perfect cast.**

November 21, 2020: I can't have a coax going in through an open window, so I laid out the coax and shoved the line in through the hole in the foundation where the other lines were running. Drilled another hole through the shack floor and pushed the coax through. I pulled the end lines up as high as I could reasonably get them. SWR curve better but still yucky, but the Rig Tuner does take it out.

2020 ARRL November SS: At 3PM the contest started and it was very obvious I was coated with tons of contesting rust developed

in the 25 years since MY last Phone SS. It was quite obvious the 40m antenna was the weakest tool in the chest. I really needed it to be the strongest. Saturday evening I was brutally kicked around and only managed to make 100 QSO's.

This weekend I forced myself back on the radio and eked out an additional 202 QSO's for a total 302 q's and 76 sections. I ended up #2 IOWA, #4 Midwest Division.

Après Sweeps: the first part of Thanksgiving week was spent preparing for hosting the family for the holiday dinner, interspersed with dragging the dipole up to 50 feet and tying it off, then taping the coax to the tower. This week had unbelievable antenna weather. It started everyday cold warming to 40's by afternoon with near dead calm winds!!! The weather forecast suggested 50 degrees Saturday, traditionally bringing increased winds. By late Saturday night the bottom would totally fall out, SOOO we better get ALL of the needed steps performed before WINTER ends all of my radio fun.

November 27, 2020: Black Friday... Just after sun-up Craig and I went outside and with AMAZONIAN DETERMINATION, I cast using my Antenna Tree Fishin' pole (Catfish Pole with 30# line and a 2.5oz sinker) all the way over the front 75 foot tree with an amazing and perfect cast. Usually I only clear the first section and the weight drops down the middle of the tree. I attribute the extra length of my cast due to my mean this gotta get done mental attitude and the extra chilly morning air... When pulling up the end insulator's support line it came up

under another branch keeping the thing from reaching full height by 30 feet! Another quick toss over the antenna only broke my 30# line while pulling down on the antenna. While driving later that day I was thinking, why didn't I tie on a paracord and pull that over the antenna, THOSE are rated 550# test!

Returning from the Sioux Falls Adventure, it was late but still a marvelous day! I say, we have an antenna line under that branch, so I did as I envisioned, shot 30# line over the antenna wire and pulled a paracord over the wire at 40' pulled the line down to free the limb and had Craig start pulling. WOW all the way to near that tree top, actually higher than the center insulator! The day still long, I said, I'm on a roll let's shoot the rear tree. A perfect cast over that tree too all the way to the very top of that tree in new growth area. While pulling the 40 up the 135' Doublet and the 40 rope crossed and the two antennas converged. Oh, that's not good! I'm going to need to think about this problem. The solution was, while changing out the center



**I wrestled the EX-14 into position, aimed it north, tightened bolts, and hooked up coax.**

mount, we'll swap the top of the rear tree paracord line for the lower in the tree paracord line. That will put maybe 6-7 feet between the antennas in more of a parallel situation, the 80m at the tree top and the 40 tied off 4-5 feet below, Perfect! Unfortunately

I didn't have the energy left to drill the new top mount and paint it Friday Night. That paint really is slow drying.

November 28, 2020: With Friday's two pulley and U-Bolt purchase, I hit our workshop early and drilled holes in the 4'er for the tower mount U-Bolts and placed a single U-Bolt through the top for a pulley at each end. With a paracord line just over the single pulleys that line will allow the antenna to hang away from the tower. With a pulley one on each end, I can now support a second antenna from this much longer mount. The forty meter dipole was down at 50 feet

and can be moved up or down slightly by adjusting the paracord from the ground. Drug out the Rust-Oleum Metallic Silver and brushed on a protective coating on the Angle. Hung it on a nail pounded into a

beam in the basement. I then proceeded to cut the U-Bolts down to lengths I could use. Seems off the shelf Stainless 1" U-Bolts are a thing of the past. Everybody stocks 1-1/8" these days. I have only found 1" U-Bolts in Shiny Zinc Plate at our local ACE store, though 2-1/2" long. After an hour or so I brought the angle up to the dining room and placed the thing on top of the radiator to hopefully rush drying time. Made Craig and I "Pigs in a Blanket" for lunch then stated WELL I need your help and nobody else is going to install this mount for me.

We dropped all four of the end ropes and loosened the 135' Doublet's center rope allowing the antenna to lower itself down 10 feet below where I'd be working. The rear tree had grown four to five feet since we had shot the first paracord into it for the original G5RV in November 2016. That single paracord line has supported all of my wire antennas since. By letting both lines down I was able to separate the crisscrossed lines, and pulled the 135'er down to the ground using the rope of the dogleg.

Up the tower I went dragging a pulley with the 1/2" 200 foot tower rope. Hooked the pulley and sent the free end down the tower. The Kline tool bag was almost ready to go, it had all necessary tools, a paracord line for the 40 meter dipole tied on, and the new sidearm mount set in it. All that needed to be done would be hook the tower rope on the bag hook when I send it down and pull everything up to me. But Craig needed to TIE a secondary string to the sidearm to keep it in the bag as it was pulled up the tower. If that thing fell out of the bag he could possibly be



### **I had to tie additional lines to the tails of the rear tree lines**

killed on the ground. I found out the only knots he could tie was a pair of tennis shoes. He's very uncomfortable with knots. We're going to need to do some training... The neighbor across the street and down a house overheard me yelling to get the neighbor to tie the knot... My Soldier wasn't going to get the Squid over to tie a knot for him. But the cross the street gal DID call my neighbor gal. EGOS! Craig did tie that bar into the bag and it took me over 5 minutes to untie all those knots, ha... I then placed the new mount on top of the original mount I would be removing, and then secured the new mount to the tower. I transferred the 135' Doublet's line to the new pulley and went to remove the 100' line in trail on the Kline bag. But when Craig was messing with tying the mount in the bag he untied that line and left it on the ground... Ok another step. Tied the 135'ers paracord to the big ratchet and sent it down and had Craig tie the removed line and tie it to the wrench.

*New House, continued on page 34*



## Dayton 2022

*Dan Dantzler, WØJMP*

**For me, this was my best** ever Hamvention. I lost count on how many I have attended. Up until 1999, I was “in uniform” in the Hy-Gain booth. It is not the same. Just had short periods to leave the booth and look around. Don’t get me wrong, I enjoyed it but it is not the same.

We missed the last two years and maybe absence DOES make the heart grow fonder. I know that I was more than ready to attend Hamvention. Besides Hamvention, I also canceled trips to Orlando and Huntsville either because they were canceled or because I got cold feet. COVID-19 left a mark on us all.

My personal situation is considerably different this year. I am leaving Minnesota and moving to Kentucky. I have been selling nearly all of my station so I did not have a list of things that I wanted to buy. That seemed a little strange but it was also “freeing” in a way. I could just look, enjoy and absorb what was out there with no pressure to make a decision.

How was attendance this year? The official attendance at Hamvention 2022 was 31,367. General Chairman Rick Allnutt, WS8G, said although that was about 1,000 less than 2019, he considered it not bad for a pandemic recovery year. To me, anecdotally it seemed like less than that. It also seemed like the attendance by hams from outside the U.S. seemed lower.

I was also fortunate to make the trip with a very close friend, K4SAF. Carol is a long-time ham who became interested in chasing DX in the last few years. I was fortunate so see David Minster, NA2AA, CEO of the ARRL present the 5 band DXCC award to her. She is also a new card checker and put in time checking cards in the ARRL booth. Thank you to Mike, WØVTT, the most experienced and professional card checkers that I have known, for helping Carol with



**Carol, K4SAF, receives the 5BDXCC Award from ARRL CEO, David Minster, NA2AA**

the card checking.

We also attended several forums the most interesting of which was the Youth Forum. If anyone is worried about the future of amateur radio, a visit to this forum is a must. There are some amazing young hams out there; the future is in good hands.

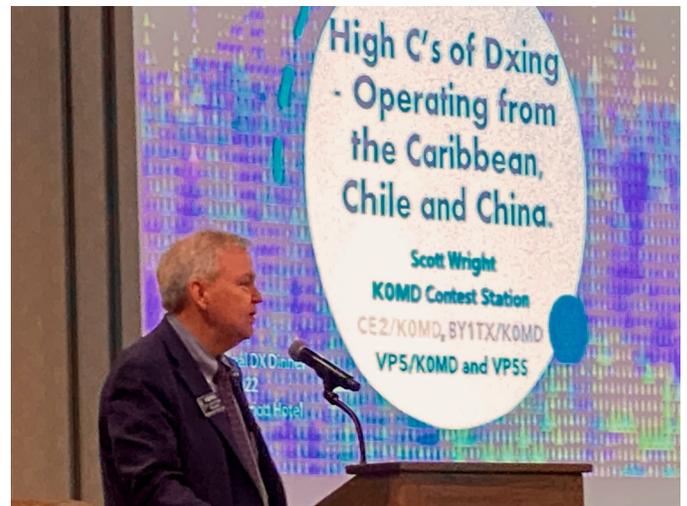
Next we were fortunate to attend the DX Dinner and hear the speaker, none other than our own KØMD, as the guest speaker. Scott talked about his experience DXing on the



**DX Dinner**

“High C’s” which meant from the Caribbean, Chile, China. As could be expected, he delivered a spellbinding presentation that left most of us mere mortal DXers slack jawed. Great job Dr. Wright.

So I cannot report on any outstanding new product introductions, and new companies to watch, or and products that will go on my “must buy” list. But I can report that it was wonderful to attend the Hamvention once again and see so many old friends and make new friends as well.



**Scott Wright, KØMD, gives the DX Dinner keynote**

Thanks to the Dayton Amateur Radio Association (DARA), for once again putting on the best ham radio gathering in the world.



Gary Grivna KØGX

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# From the Editor

*Dan Dantzler, WØJMP*

**This is my last issue** as editor of the TCDXA Gray Line Report. I leave with mixed emotions. I enjoyed my time with the newsletter but I am out of ideas and my enthusiasm is waning. As Mike, WØVTT said, “It is hard to write when the muse has left the house.”

Sometime in early 2016, while attending a TCDXA meeting, Jim KØJUH announced that he would be stepping down. Jim had been the editor since Volume 1, Issue 1 in March 2004! Mike Sigelman, KØBUD was then the president of the TCDXA. He pointed at me and said, “Dantzler, you are now on the newsletter staff”. I may not have been listening carefully so I said OK, thinking that I would be the new Jimmy Olson, cub reporter. But no, I was the new Perry White, editor! Yikes! That was about like putting a weekend sailor on the helm of the Mighty Mo! I was in way over my head. But luckily, the rest of the staff, Al KØAD, Dave KØIEA and Bob WØBV were still on board and they had many years of experience with the newsletter. So with fear and trepidation, we put out the next issue, March 2016 with me as the editor. Rocky start but thanks to the others, it came out OK.

Then the other shoe dropped; Dave and Bob announced that they too had been on the newsletter staff long enough and were resigning too! Holy smokes! I now went from being over my head to being over my head in shark infested waters. I knew I could not do it. So I talked to Al, KØAD and asked

(begged, pleaded, beseeched and implored) him to be the editor. Bob, WØBV had been doing the layout using Microsoft publisher. I told Al that if he would become editor, I would take over the layout work. I was pretty good with MS Word and an Excel power user. How hard could MS Publisher be? Al agreed and I recruited Jeff WØJM to proof-read. I bought several books on Publisher and bought a copy of MS office. Guess what? MS Publisher is a LOT harder to learn than Word and my experience with Excel was not very useful. Bob, WØBV helped as he could and somehow, the June 2016 issue was published; whew! I just looked back at that issue and it looks OK despite all the behind-the-scenes unorthodox tricks I used to lay it out.

Jeff WØJM was very busy in his career and had to step aside from his proofreading role so I recruited Keith, K9WAG to proof-read. Keith and I have been close friends for well over 30 years. Keith has an excellent command of English and did a great job. We spent long hours on the phone trying to get exactly the right word or phrase put together.

Beginning in March of 2018, Mark KØJM took over the layout duties. Wow! That guy really knows his stuff. He had recently retired as a professor of communication studies at Luther College in Decorah, Iowa. Mark WAØMHJ and Dave WØZF took on the proofreading duties and Al KØAD continued as editor.

I did not want to leave the publication without a new editor on board. Fortunately, Bill, AJ8B stepped up to take the mantle.



## Note from the President

Bert Benjaminson, WBØN, President

**Hi all!** It has been great having our meetings back at Pub42, thanks to all who have showed up. It's really fun having our bar time before the actual meeting. Also, thanks to all that follow the meetings on Zoom. Our start time for the actual meeting is 6:30 p.m. when we will have the business part of the meeting and then at 7:00 p.m. we will have our guest speaker on.

At the April club meeting It was fun seeing Bill WØOR get an award for 50 years as an ARRL member. And the TCDXA getting a plaque for 50 years as an ARRL affiliated club. Both awards were presented by our Dakota division director Bill Lippert ACØW. The TCDXA award was accepted by Bill Dean WØOR, Dave Wester, KØIEA, Ron Dohmen, NØAT, and Hans Brakob, KØHB.

Also, great news: We have a new editor for the *Gray Line Report*! New club member Bill Salyers, AJ8B!!! Thank you, Bill!! Bill has been doing the SouthWest Ohio DX Association (SWODXA) newsletter for some time and will be a great addition to our *Gray Line* staff. I would like to thank Dan Dantzer, WØJMP, for his long involvement in the *Gray Line*. Good job Dan and best wishes for you and your future endeavors!

Also, I want to congratulate Dr. Scott Wright, KØMD, for his induction in the CQ Amateur Radio Hall of Fame! You the man Scott!

The May meeting went pretty smoothly. We had a decent turnout at Pub42, and also on Zoom. Covid is trying to make a comeback but still way down from the peaks. Bands are looking better, so lots of DX for all.



## Dollars for DX Report

Mike Cizek WØVTT, DX Grant Manager

**The DXpedition world** is slowly waking up and recovering from the big covid shutdown of the past two years. We have had three DXpedition funding requests since the last Grayline, two of which were approved.

The Mediterranean DX Club requested support for their J28MD trip to Djibouti. Since J2 only ranks #120 on the Clublog global list, we did not even consider this one.

Yuris YL2GN requested support for his VU4W trip to Andaman and Nicobar Islands as leader of a small team including two Indian hams. We have supported him in the past and, based on results from his previous trips, we felt confident his team would be very successful and voted to give them a \$500 grant. The two VU2 hams were not able to make the trip, so it turned out to be a solo operation. Despite this, Yuris still managed to exceed the team's goal of 30k QSOs during the operation.

Our third request was from Murray WA4DAN who is leading a trip to Sable Island this fall as CYØS. Sable Island, like many other islands that are also wildlife reuges, is becoming much more difficult to access than they were in the past. Despite having made five previous trips to Sable, permission for this trip required years of negotiations and was only obtained after a few in person visits to the Parks Canada personnel who have jurisdiction over Sable. The team for CYØS are well experienced and include TCDXA member Glenn WØGJ. We recently voted in favor of a \$600 grant for Sable.





# The MWA Contest Corner

## Writer's Block

By Al Dewey, KØAD



I've been writing this column for the *Gray Line* for ten years now. During part of this time, I also assumed the role of Editor for the *Gray Line*. In all that time, I've always been able to come up with something contest related to write about without, hopefully, being repetitive. For the first time, however, I found myself facing sort of a "writer's block" since the first of the year. I hadn't really been able to put my finger on a reason why. However, yesterday, I was browsing *Solid Copy*, which is the excellent newsletter for the CW Ops organization. The editor was bemoaning the same exact thing! He attributed a part of it to putting ham radio in perspective with all the troubling things going on in the world right now. That perspective resonated with me. For example, I was saddened when I saw that CQ magazine disqualified all Russian stations from participating

in any CQ sponsored contest (e.g. CQWW, CQWPX). I'm not necessarily saying it was the wrong decision but it still saddened me. As does the thought of all the people suffering in Ukraine right now.

Other things contributing to my malaise is that, once the ARRL CW DX Contest is over in mid-February, there is no major contest that appeals to me until WPX CW in late May. Sure there are the SSB versions of ARRL DX and WPX but, like many, SSB contests just do not motivate me like CW and RTTY events do. So, it's over three months until the next major contest that I can get excited about.

Having said all that, there are a couple things I would like to talk about. Here goes.

### **The New ARRL Digital Contest – June 4-5, 2022**

The newer digital modes like FT8 and FT4 have clearly taken our hobby by storm which is a good thing. I am not very active on these modes myself but can see the appeal to those who enjoy the technology and / or may be in a situation where they are not able to put up much of an antenna for HF operations (e.g. apartment, condo, HOA, etc.). These modes make it possible for these guys to work stations on HF that might be a real struggle on conventional modes such CW or SSB. Truth be told, I used WSJT to get my last few countries on 80 meters for 5BDXCC. I've operated the digital modes in a couple contests in the last

year or so and, to be honest, did not find it very exciting.

Having said that, I am intrigued by the announcement of the New **ARRL Digital Contest** debuting in June. By the time you read this, the first run of this contest will be history. Despite my apathy for digital contests (not including RTTY by the way), I have to admit that the design of the contest and the rules impressed me a lot. The time frame is reasonable (24 out of 30) hours starting at 1 PM local on Saturday. I'm not a big fan of the "only two breaks" rule but can live with it once I refresh my memory on how that works. This is how the ARRL RTTY Round-up works. I like that it is an international contest and that the power is limited to 100 watts! Seems crazy to be going up against 1500 watt stations in a digital contest.

I like that it will use distance based scoring like is used in the Stu Perry contest on 160. I also like the fact that the contest spans all the non-WARC bands from 160M through 6 meters. I am not aware of any other ARRL contests that do this. Also, this is the first ARRL contest in which SO2R had been put in a separate category. Normally, I would be very much against this move in a CW, SSB, or RTTY contest, but I think it is OK for digital contests since the computers are doing most of the QSO effort anyway. I also very much like the "Limited Enclosed Antennas" and "Limited Time" overlay categories. There are very few contests I know of that accommodate participants who may be in an apartment / condo living situation with no practical ways to put up an outside antenna. Of those with such a limitation, I suspect many of them operate the digital modes so

this was a good choice. Also, those who cannot devote an entire weekend to the contest can still compete with others who are only operating the contest for a maximum of 8 hours over the weekend.

The new ARRL Digital Contest will include both a Club Competition (e.g. MWA) as well as a Team Competition. There are advantages to both so I am glad to see both groups being included.

Finally, I commend the league for removing the NEW digital modes from the RTTY Round Up event in January. To me, having both RTTY and FT4/FT8 in the RTTY Round Up made about as much sense as combining CW and RTTY in the same event. I am glad that the RTTY Round Up will be back to a pure RTTY contest!

I am anxious to see what kind of participation this event gets. In my opinion, the ARRL did its job by coming up with a great set of rules.

### **ARRL Field Day – June 25-26, 2022**

It's been a long spring in Minnesota and one of the things that makes me feel better this time of year is to start thinking about ARRL Field Day. I'll be participating again up near Park Rapids, MN with a small group of guys who call ourselves the Blue Lake Brothers. It's always a great time.

There are some interesting rule changes this year – some good and some questionable. First of all, the rule where home stations (i.e. Class D stations) can all work each other rather than just portable stations will be made permanent. This rule came into being during the peak of the pandemic when many

## New House, New Tower

*Continued from Page 26*

field day groups stayed home rather than risk gathering in groups. It was the right decision for that time but I am not convinced it should be made permanent. I worry that more and more participants will choose the easy path of operating from home and it will become basically another Sweepstakes contest rather than the event for stations set up in the field under "emergency" conditions.

Another rule change for this year which I strongly favor is the elimination of the high power category for all stations. All Field Day stations (whether home or portable) will be limited to 100 watts. With the increased incentive for home stations to participate in Field Day, it certainly makes sense to set the maximum power level for ALL participants to 100 watts. Most home stations already have an advantage over the portable field stations (often with a dipole in the trees) so it makes no sense to also allow them to also run their amplifiers. Good call, ARRL.

The final rule change has to do with the bonus points for media publicity. Starting this year, Field Day stations must show proof that they actually had media coverage of their field day operation rather than just show that they attempted to do so. This seems to make sense to me, also.

So, that's it. Field Day has certainly changed over the years but it continues to be my favorite operating event of the year. This is my 60<sup>th</sup> year as a licensed amateur. I can comfortably say that I have participated in ARRL Field day somewhere in either Indiana or Minnesota for over 50 of these years.

See you in the pileups!



I pulled it up, held the 40m line in my mouth sent the ratchet back down, asked him to tie off the doublet. I then threaded the paracord line through the 40m pulley and tied it to my safety belt.

All tools and original mount into the Kline Bag with me tying it off and sent it down. I hooked the pulley to my belt and climbed down to the 40m dipole and secured it to the new Paracord that was being pulled down while tied to my safety belt. Removed the short line holding the 40 and had Craig tie off the line below. I climbed down.

What's left? I had to tie additional lines to the tails of the rear tree lines, pulled the original 135'ers paracord tied to my belt up the tower to 20', removed the rope on the 40 and tied the old 135's line on the insulator. Climbed down and tied the 40 to the 135. Pulled the 80 up, wow look at that! Pulled the 40 up and no more Xing lines and nice separation. Then pulled the 135' L Dogleg out to the side yard's screw anchor. Except now my paracord rope is about 6" long out front instead of ten or twelve feet of tail!!! That 135'er is really up there. Pulled up the two front lines. Came in the house with just enough time to phone in the pizzas for tonight's "Neighbors over Pizza Night".

Phone SS in the log, the next contest approaching was the 160 meter contest. Without moments to spare I thought I'd try feeding the 135' CF Doublet as a flat top on 160m. I hooked the two sides of the window line together at the back of the rig and fed them through one side of a homemade balun with the opposite side to the shack ground and a couple 130' long radials running across the yard and along the property line...

*New House, concludes on page 35*

**TCDXA OPERATING BUDGET FY 2022  
(Sep 2021 - Aug 2022)**

**June 14, 2022**



<b>INCOME</b>	<b>ACTUAL</b>	<b>BUDGET</b>	<b>Actual 2021</b>
Surplus from FY 2021 (balance 8/31/2021)	<b>12915.93</b>		<b>9100.90</b>
Member Dues 2022 by Cash/Checks/PayPal	4715.92	4400.00	<b>5122.90</b>
Door Prize Ticket Sales club share	166.00	500.00	<b>55.00</b>
Donatons (estates, wills, etc.)	0.00	0.00	<b>0.00</b>
Refunds and Reversals	0.00	0.00	<b>0.00</b>
<b>TOTAL INCOME</b>	<b>17797.85</b>	<b>4900.00</b>	<b>14278.80</b>
<b>EXPENSES</b>			
		<b>BUDGET</b>	<b>Actual 2021</b>
Member Recruitment/Retention/Zoom	(195.96)	(300.00)	<b>(160.96)</b>
Website ISP & Domain Name	(97.77)	(150.00)	<b>(75.69)</b>
Office Supplies, Miscellaneous expenses	0.49	(50.00)	<b>(46.22)</b>
Flowers <SK> and Hospital gifts	(80.63)	(200.00)	<b>0.00</b>
Holiday Party Dec 2022	0.00	(500.00)	<b>0.00</b>
ARRL Spectrum Defense Fund	0.00	(250.00)	<b>(250.00)</b>
NCDXF Donation	0.00	(250.00)	<b>(250.00)</b>
MVA Plaque	(80.00)	(80.00)	<b>(75.00)</b>
DXpedition Contributions Total	(6,646.07)	(8000.00)	<b>(500.00)</b>
#1 Dxpediton - 3YØJ Bouvet	(5,045.00)		
#2 Dxpediton - 3DAØRU Eswatini	(250.00)		
#3 DXpedition - 7P8RU Lesotho	(251.07)		
#4 Dxpediton - VU4W Andaman Isl	(500.00)		
#5 Dxpediton - CYØS Sable Island	(600.00)		
#6 Dxpediton -	0.00		
#7 Dxpediton -	0.00		
#8 Dxpediton -	0.00		
#9 Dxpediton -	0.00		
#10 Dxpediton -	0.00		
<b>TOTAL EXPENSES</b>	<b>(7099.94)</b>	<b>(9780.00)</b>	<b>(1357.87)</b>
<b>NET</b>	<b>10697.91</b>	<b>-4880.00</b>	
Checking balance	<b>10418.61</b>		
PayPal balance	<b>279.30</b>		
Cash / Checks on Hand	<b>0.00</b>		
<b>NET BALANCE</b>	<b>10697.91</b>		

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

## Backscatter

Collected by Mark Johns, KØJM

### WELCOME ABOARD

*TCDXA welcomes these new members:*

Cap Allen, WØCCA  
Dolores, Colo.

Lyle Miller, WB9OKQ  
New Richmond, Wisc.

Bill Salyers, AJ8B  
Waynesville, Ohio

Paul Husby, WØUC  
Roseville, Minn.

Bob Seaquist, W9LSE  
Holmen, Wisc.

**Dr. R. Scott Wright, KØMD**, of Rochester, Minn, was inducted into the CQ Amateur Radio Hall of Fame at Dayton Hamvention on May 20, 2022.

Scott is an active DX'er and contester. He has operated from several DX locations including Chile, China, and Turks and Caicos. Organizations Scott is active in includes the Rochester Amateur Radio Club, the Twin City DX Association, and the Minnesota Wireless Association. He is also president of the Rochester DX Contest Club and is a life member of the ARRL. Scott is a past editor of the National Contest Journal, which was started 50 years ago by the Minnesota Wireless Association.

When not busy with his ham radio activities, Scott is a cardiologist with the Mayo Clinic in Rochester, Minn. One of his accomplishments includes being the leader of the team developing the use of convalescent plasma as one of the first treatments for Covid-19.

Congratulations Scott on being inducted into the CQ Amateur Radio Hall of Fame.

### Zorro JH1AJT—Silent Key

INDEXA, the DX community, and the world lost a great man. Zorro, JH1AJT, died on March 22, 2022 after a long battle with cancer. Until the end, he was optimistic; cheerful; and most importantly, concerned for his fellow human beings, especially disabled children. Through his schools and his humanitarian trips in Asia and Africa he brought a better life to all of those he touched.

We of the DX community are deeply indebted to him. He contributed generously to DXpeditions and encouraged and mentored operators. Without Zorro's support our log-books and our memories would be less than they are.

Zorro's legacy and a deep bond will live on within INDEXA. He established and endowed INDEXA's Humanitarian Aid Fund. Through it, Zorro's helping hand will always be extended.

We called each other "brother." But he was truly a brother to us all and all of us will miss him.....

Ralph Fedor, KØIR

## New House, New Tower

*Continued from Page 33*

The SWR tuned right in with the Flex-6500's rig tuner. I then proceeded to work the 160m contest, followed the next weekend with the 10 meter contest. The CQ 160 Phone and ARRL Phone All went well... I'm now ready for a little contest break.

(Note: *Stay tuned, may be another article coming with more antenna installations on the tower.*)

