B-PLUS

Albany **A**mateur **R**adio **A**ssociation – AARA

June 2024

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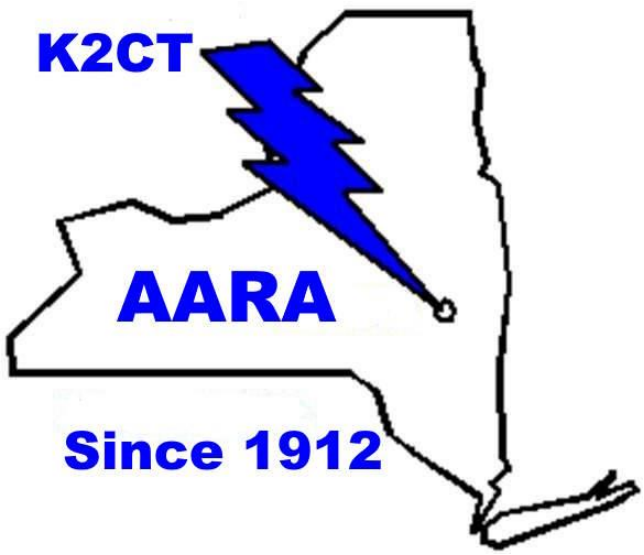


AARA Next Meeting:
June 5th, 2024 @ 7:30 PM
Slingerlands Fire Dept.

Topic:
Field Day Planning

PLEASE Pay Your Dues
Dues are $20
Checks can be sent to:

Saul Abrams, K2XA
307 Maple Rd.
Slingerlands, NY 12159

AARA's Field Day Event will be at Thacher Park.

Setup will be on Friday, June 21st.

Please attend our June meeting to discuss the details and be prepared to operate at Field Day weekend.

All are welcome!

Fred's Sandbox

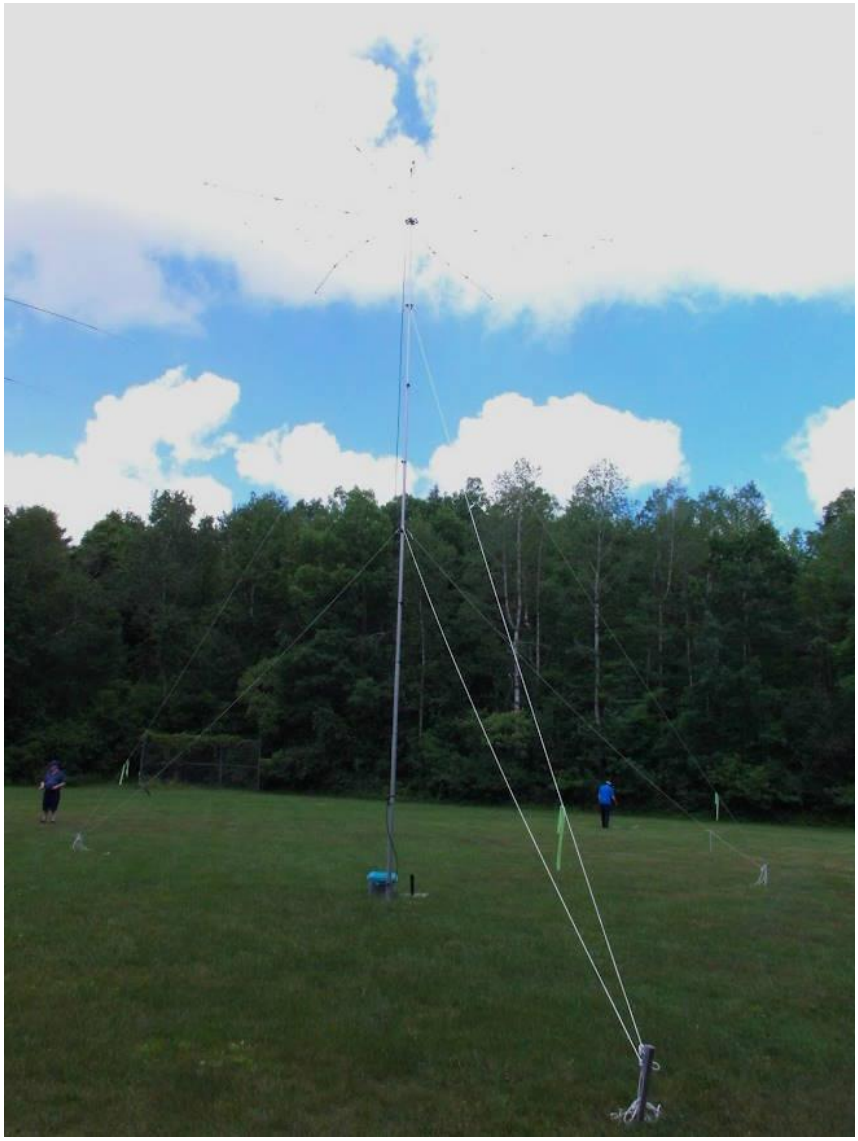
2024 Field Day Antenna Plan

Many of my sandbox articles have dealt with end fed half wave antenna design. The EFHW is alluring because it is a single simple antenna works on all of the harmonically related HF bands. That is especially true of the CW segment of the ham bands. Additionally, the Field Day scoring rules favor CW contacts over SSB QSOs. Rich, W2EG, typically makes more points during Field Day than any other operator. Rich is our CW Guru, and is a big fan of EFHW antennas.

I have been working with Rich to optimize an EFHW antenna for Field Day. He purchased a high performance 49:1 transformer and I built a Guanella Balun, which is the best way to choke off feedline radiation for an EFHW. Next, we separated the two devices by approximately 14' of RG-8 coax. That coax becomes the counterpoise necessary for predictable tuning and operation of an EFHW. We then tested the antenna at Henry Hudson Park in Bethlehem, and optimized the length for good SWR performance on 80-10 meters. We plan to use that antenna as the primary antenna on 80 CW and also available as a second antenna on the low end of 40-10 meters. Rich has suggested that the connect that antenna directly to the Elecraft K3S without going through the patch panel. We can try that at first while Rich is operating, as he will be able to change bands quickly and easily. Later on, we may connect the K3S and EFHW to the patch panel for additional flexibility. During Field Day I will be watching the results to see how well that plan works.

With increasing sunspot numbers improving the conditions on the “high bands”, and Field Day occurring during the longest days of the year, and these HF frequencies are daytime bands. all suggest that we should do whatever we can to make more QSOs on 20, 15 and 10 meters. Last year's plan of the Spider Beam on John's Fritze's push-up mast worked extremely well. The SWR was optimum on all three bands, the antenna was high enough to perform well, and the Triplexor and filters made the antenna

available on these bands simultaneously. I would like to use the Spider beam again this year. It was easier to erect on the push-up mast than it was on the tower trailer.



Push-Up Mast

That said, fate changed our plans when the second HF antenna, a Butternut beam, was destroyed. At the last minute Dave Unverhau came through with a TA-33 JR that had been sitting on the ground in his back yard. Since last year I refurbished the traps on that antenna and we used it successfully during

Winter Field Day. I also found a second TA-33 JR at an estate sale. This year I propose to put one of those TA-33 JRs at 55' on the mast above the 40 meter beam. I know this will work mechanically as the extra 10' steel extension mast that I used last year for the 75 meter antenna is the same weight as a '33 JR. As I was contemplating how well an antenna at 55' feet would work, I realized that I could carry the second TA-33 up the tower to the 30' level, getting us stacked tribanders! To make it work, we will use identical lengths of coax to each antenna, and I will build a toroidal 2:1 broadband matching transformer. Stacking antennas in this way usually results in a flatter SWR curve. As such, these stacked antennas should tune well on both ends of the bands. I encourage each and every one of you to use these antennas and learn their advantages.

Crank Up Tower

With two very optimum HF antennas for Field day, the next question is which one should be connected to the Triplexor? I'd be interested in your opinion,

or we can try it both ways once the antennas are up and working.

Lastly last year's experiment of a 75 meter colinear was exhilarating to operate, as the QSO rate was in the 100 QSO per hour range for 2 hours, but the activity level dropped off quickly later in the evening. That fact plus the idea of using the top of the Rohn 25 for a tribander, makes me want to skip that antenna this year. The other two options are a single dipole, or perhaps the 80/75/160 trap dipole that I built for Winter Field Day, but that antenna may be too long to fit on the baseball field. If it fits between the 40 meter tower and a tree near the backstop, I'd like to try it because it's pattern shows gain on 80 & 75 in the direction of the far end of the antenna. If not the plain ol' dipole always works well.

With the multiple antenna options that we have and the high activity on digital modes, it will be technically possible to run more than one digital station simultaneously. Has anyone tried running two stations at the same time? There will be slow times later at night when that might be workable. Running two digital contacts simultaneously on two bands is much easier than two SSB or CW contacts.

Night Time

I hope all of you enjoy the different antennas that we have been trying on Field Day. I relish the time working with all of you as we keep trying things and learning together!

Important Links:

Find a license class in your area: www.arrl.org/class

Find a license exam in your area: www.arrl.org/exam

The Eastern Iowa DX Bulletin:

http://www.eidxa.org/EIDXBulletin.html