

W9JOZ

Volume 9, Issue 5

May 2019

Next Meeting is May 16th

Dues are due and still \$12.00

Weekly 2 meter Net

We are having the Saturday Night Net at 8:00 pm on the 145.410 repeater.

Hope you can check in and join us for some good conversation.

We could use some more check-ins on the net.

**Thanks
John W3ML**



Meetings are at the Henry F. Schricker Library on the third Thursday of each month, with the exception of December.

The library is located on west Culver Road, two blocks west of Highway 35.



Are you on the air?

INSIDE THIS ISSUE

- 1 Meeting Reminder
- 2 Events/Articles

March Events

Fox Hunts start April 14th See webpage for details

Birthdays

6th - KC8PKY, Linda

24th - KC9FQA, Bart

Starke County Amateur Radio Club Weekly 2 Meter Net will be on each Saturday at 8:00 p.m. Central time.

DAY OF WEEK: Saturday 8:00 p.m. Central time

HOST: KN9OX Repeater

FREQUENCY: 145.410 - 600

PL TONE: 131.8

News Items Listed

See all the For Sale Items at

www.w9joz.org/forsale.htm

There are a lot of them there.

Getting loaded (antenna-wise, anyway)

By Dan Romanchik, KB6NU

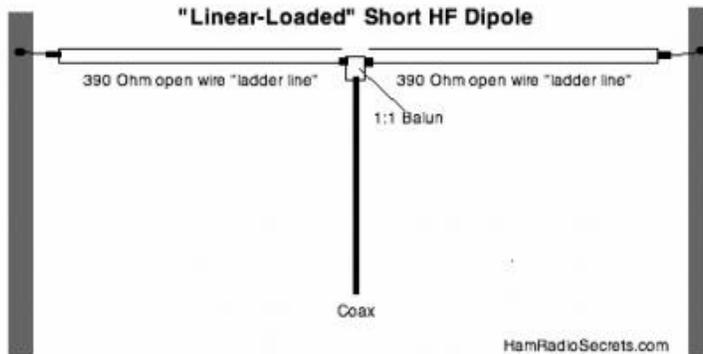
A couple of years ago, I homebrewed a "Cobra" antenna (<https://www.kb6nu.com/yet-another-new-antenna-the-cobra/>). It's a doublet antenna, meaning that it consists of two elements connected to a center insulator, where it connects to a feedline. The unique thing about the Cobra antenna is that each element consists of three parallel conductors connected in series.

My antenna uses a lightweight, three-conductor rotor cable that used to be available from Radio Shack. The feedline is 450 Ω ladder line that connects to an antenna tuner to give me multi-band operation.

Connecting the conductors in this way is supposed to provide "linear loading." Somehow, running the conductors in parallel is supposed to increase the antenna's effective length. My antenna is only 73-ft. long, but it easily tunes up on 80m.

The *ARRL Antenna Book* has a short section on linear loading. It says that linear loading is a "little understood" alternative to inductive loading that can be applied to almost any type of antenna. Furthermore, "...it introduces very little loss, does not degrade directivity patterns, and has low enough Q to allow reasonably good bandwidths."

As I mentioned, I've been using this antenna with good results for a little more than two years now. When I first put it up, someone mentioned the concept of linear loading to me, but not being an antenna guru, I didn't 'give it much thought. About a week ago, though, I ran across a link to the page Short Ham Antennas for HF (<https://www.hamradiosecrets.com/short-ham-antennas.html>). That got me thinking about the topic again.



This page describes a way to build a linearly-loaded dipole antenna with a feedpoint impedance of approximately 35 Ω . This allows you to feed it with coax instead of the ladder line that I use. The author uses 390 Ω ladder line for the elements. He says it's commonly available, but I don't think I've ever seen 390 Ω ladder line. You could probably use 450 Ω ladder line by adjusting the element lengths a little.

At that point, I started Googling. The next linear-loaded antenna design that I ran across is a design from M0PZT (<http://www.m0pzt.com/40m-linear-loaded-dipole/>). He built his elements from some sturdy wire and homebrewed spacers made from PVC pipe. He's used this design for the 40m elements of a fan dipole covering the 40m, 20m, 15m, and 12m bands. Only the 40m elements are linear-loaded.

I also found a design for a linear loaded vertical antenna for 40m and 80m (<https://www.qsl.net/pa3hbb/ll.htm>). This antenna is only 7.736m, or 25.4 ft. tall. Of course, it requires a good radial system to work well, but it will work a lot better for DX than a low doublet or dipole.

Finally, there's an eHam discussion on linear loading (<https://www.eham.net/ehamforum/smf/index.php?topic=84418.0>). Unlike a lot of eHam discussions, this one is quite civil. It's worth reading if you're interested in the topic.

So, if you're thinking of getting loaded, errrrr, I mean loading your antennas, here's a method for you to consider. It works!

New Hams in the Area.

If you know them invite them to join us at a meeting or even for breakfast at Fingerhut.

Nathaniel Sirb, KD9MOX
2185 W 400 S
North Judson, IN 46366-8585

Edward P Mylotte, KD9MVW
6230 S 600 E
Knox, IN 46534-7898

DX Awards & Certificates https://qsl.net/va3rj/awards_dx.html

Interesting, but obviously pre-OSHA (woman handling components around liquid nitrogen for one). Lots of quality checks, too. More to that 1950's TV than we probably knew.

https://www.youtube.com/watch?v=lxQS58t39_U

New Digital Mode Coming --- FT4

This is from K1JT, K9AN, G4WJS

Soon after the "FT8 Roundup" held on December 1-2, 2018, we started serious work on a faster, more contest-friendly digital mode that can compete with RTTY-contesting QSO rates while preserving many of the benefits of FT8. The result is FT4 -- a new digital mode specifically designed for radio contesting.

Over the past month a small group of volunteers have been conducting on-the-air tests of FT4. The early tests were very successful and helped us to make a number of important design decisions. We believe FT4 has considerable promise for its intended purpose.

We'll soon be ready for testing by a larger group. If you might be interested in participating and offering your considered feedback, please read the descriptive document "The FT4 Protocol for Digital Contesting", posted here:

http://physics.princeton.edu/pulsar/k1jt/FT4_Protocol.pdf

We plan to post downloadable installation packages for WSJT-X 2.1.0-rc5 on April 29, one week from today. The document linked above includes:

- Instructions for installing WSJT-X 2.1.0-rc5 and FT4 configuration
- Operating instructions for FT4
- Basic description of the FT4 protocol, modulation, and waveform
- Detailed sensitivity measurements for FT4 under a wide variety of simulated propagation conditions
- Schedule for upcoming test sessions

Please consider helping us to make FT4 a successful mode for digital contesting.

With best wishes and 73,

-- Joe (K1JT), Steve (K9AN), and Bill (G4WJS)

ARRL Rolls Back Outgoing QSL Bureau Rates to 2011 Prices

04/15/2019

ARRL is rolling back Outgoing QSL Bureau rates to 2011 levels. Effective May 15, 2019, the new rates will be:

- \$2 for 10 or fewer cards in one envelope.
- \$3 for 11 – 20 cards in one envelope, or
- 75 cents per ounce for packages with 21 or more cards. For example, a package containing 1.5 pounds of cards — 24 ounces, or about 225 cards — will cost \$18.

No transaction service fees.

Any cards received before May 15 will be charged the current rate. There will be no adjustments for cards received before May 15.

Ed Note: I was told that there is a \$2.00 minimum fee.

I am still inventorying Doc's K9QA stuff. The list is updated as of May 8th and will be further updated either this weekend or next week.

Some have asked for items, but not closed the deal.

If you are still interested, please email me and let me know.

Thanks John W3ML

Contesting at the Bottom of the Cycle

By Al Dewey, KØAD

It's no secret that contesting the last couple of years has been a challenge. With 15 and 10 meters all but closed, it seems like the whole world is crowded onto 20 meters during the day. Even on 20 meters, pileups on common DX can become a challenge especially on Sunday afternoons. Trying to run with low power or average antennas becomes frustrating. Openings to Europe and other areas of the world are often short and shallow. Sometimes the low bands will compensate but not always. Fading, noise, and QRM can make Friday and Saturday nights a good time to go to bed early. We know that bands will return some day (right?) but, in the meantime, what's a contester to do? Here are a few suggestions I have come up with in no particular order.



Al Dewey- KØAD, as a teenager, was first licensed in 1961 in Munster, Indiana with the call KN9DHN. He later moved to Minnesota. He is the ARRL Contest Advisory Committee Chairman and the former editor of the National Contest Journal. His station is a FLEX 6600M, Force 12 C4SXL 4 Band Yagi at 50 feet (with INRAD Triplexer), 80 Meter Inverted V and a 160 Meter Inverted L. He resides in Plymouth, MN.

Modify Your Expectations

I have spoken in the past of the benefits of setting personal goals for each contest you enter. Without a goal, I often lose interest early in a contest. At the bottom of the cycle, I am less motivated to make a full out effort even in a domestic contest. I will often look at past contest results (from a previous propagation minimum) and, perhaps, set a goal to beat that score. To set a goal to beat a previous “top of the cycle” effort is a recipe for disappointment. Perhaps set a goal to place well (or even on top) of the list of scores from your ARRL Division rather than trying to beat stations in the southern latitude with much better propagation. This is, of course, true at any point in the cycle but perhaps even more relevant at a solar minimum.

Don't Assume Zero Activity on the High Bands

Although it is likely that there will be minimal activity on 15 or 10 meters during a solar minimum, don't assume there will be none at all. Some of the newer Software Defined Radios, allow you to set up multiple “slice views” on the same screen. This allows you to keep an eye on the other bands while doing your primary operating on a band that is open. Of course, you can also use the spotting network to do this but seeing a lot of spots on a band and actually hearing them are two different things.

Consider a Single Band Effort

Contests like the ARRL DX, CQ WW DX, and CQ WPX Contests all have single band categories. Rather than burning a whole weekend beating yourself up on bands that are in lousy shape, perhaps this is the time to try a single band effort on a band that is in decent shape (perhaps 40 or even 20 meters).

Focus on Domestic Contests

Although bad propagation affects all con-tests, it seems to have less of an effect on domestic contests. Contests like ARRL Sweepstakes, North American QSO Party, ARRL 160 Contests, state QSO Parties, etc. can still get the juices flowing even at the bottom of the cycle.

Use the Spotting Network Wisely

Although using the spotting network when operating assisted is not something you only do at the bottom of the cycle, you might use it a little differently. To avoid disappointment and frustration, care should be taken to set up filters so that you are not flooded with spots you are never going to hear. This is even more of an issue at the bottom of the cycle. Nothing can be more frustrating than seeing the band map on 10 and 15 meters lit up with spots that you don't have a chance of hearing!

Operating contest after contest with poor conditions can be discouraging and make you even question why you are doing this. You can take comfort in the fact that you are not alone. One of the most compelling slides that Rich (NØHJZ) shows every year is one that shows the total aggregate score for the last 20 years or so plotted on the same axis as the smoothed sunspot number for that year. The correlation between the two is no surprise. Every once in a while, there will be a surprise and the bands will be wide open to the world during a major DX contest. It doesn't happen very often but, when it does, it gives us all hope for better days ahead.

Stay Positive

Even at the bottom of the cycle, there can be some surprises. Freak openings on the high bands do occasionally occur. In the recent ARRL CW DX Contest, conditions on 20 meters were very good, except perhaps, to Asia. Contesters enjoyed some long runs into Europe. Stations not used to running on 40 meters during a DX contest were able to do so. And 80 and 160 presented some of the best low band conditions many had seen in quite a while.

Looking Ahead

One of the things that always interested me when I operated at a farm in Eau Claire, WI was the long plot of the propagation cycle that Paul, WØAIH (SK) had displayed in the main operating chalet. It covered many decades. When looking at the chart at the top of the cycle, Paul always speculated whether this would be his last solar maximum.

Regretfully, for Paul, the last maximum was, indeed, his last. But what about you? How many are in your future? At 72, I am hoping for at least two more. A third might be possible but, if my arithmetic is right, I would be closing in on 100 at that time. Will I still know (or care) what a solar maximum is at that point? See you in the pileups.

The above article was originally published in the Twin Cities DX Association Newsletter "The Gray Line" March 2019.

If you have a presentation for the meeting, please let me know.

If you have something for the newsletter, please send it to me before the 20th of the month.

See you at a meeting.

73

John, W3ML

