



ADXA Minutes



The fourth quarter meeting of the ADXA was held at the Windham Riverfront Hotel in Little Rock on December 01, 2018. Those ADXA members that signed the sign in sheet include: Glenn Wolf—N5RN, Shane Driskill-KG5SRO, Earl Smith-N5ZM, Pat Patterson—W5VY, Dawn Gray-N5QT, Roger Gray-N5QS, Bill Merritt-K4WPM, Mark Davis-WB5YEY, Stan Ross-K5VR, Ron Evans-K5XK, J Ferguson-N5LKE, Joel Harrison-W5ZN, David Norris-K5UZ, EJ Jones-K5EJ, John Evans-WB5BHS, Jonathan Setcer-N5QJ, Don Banta-K5DB, Paul Dixon-KK5II, Mark Whatley-K5XH, San Hutson-K5YY, Ken Blevins-K5ALQ, Herbert Stites-WA0TEY, Burt Bates-WA5RN, Kenneth Thompson-KG5KS, Frank Kollatt-W5BPT, Ben Tomlinson-W5MQ, Bruce Plantz-K9OZ, Dennis Schaefer-W5RZ, and Rick Harris-AI5P.

Guests that signed in included: Bernie McClenny-W3UR, Frank Donovan-W3LPL, Chris Brown-W5TCB, Wayne Mahnker-WA5LUY, Kenneth A Leo-W5HXX, Nathan Bloch-W6NJB, Richard Daily-KB5FLA, Steve Rutledge-N4JQQ, Thomas Raup-KG5STP, Charles Talley-KJ4KVC, Madge Kollatt-W5EFA, and Keith Miller Sr-N9DGK.

President Joel Harrison, W5ZN, called the business meeting to order about 2:20 PM.

N5QS made a motion that the

minutes for the previous meeting be accepted as printed in the newsletter. K5UZ seconded and motion passed by those attending. N5RN gave treasurer's report. N5ZM made a motion to accept the report. Motion was seconded by K5UZ and the report was accepted.

Old Business

There was no old business to discuss.

New Other Business

Joel shared that the E-Board suggested a donation to help with the XX9D dxpedition. The motion passed.

K5YY suggested that we carefully consider our contributions at the \$500 level.

No updates on the Bouvet refunds at this time.

K5YY asked everybody to turn something in on their your statistics. Everybody had to come up through the ranks to earn DXCC and other awards. Contact W5YV with your stats.

A motion was made from the floor to keep the current slate of officers. This motions was seconded and passed. All those nominated agreed to serve again.

DXHog award was presented to WB5BHS.

Frank Donovan and Bernie McClenny were presented with the Arkansas Traveler award.

Drawings: N5QT won a \$100 DXEngineering gift certificate. W5VY won a \$250 DXEngineering gift certificate.

K5DB gave a brief presentation on the Arkansas QSO Party. It is only a 12 hour contest and it is the 2nd weekend in May.

A motioned that we adjourn the meeting was made and seconded and the business meeting adjourned at 3:00 PM.

Card Checking

If you have cards that you would like to have checked, please contact Earl N5ZM and let him know. He will have a table in the flea market at the Russellville hamfest.



ADXA Website

[Click here](#)

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Items of Interest

[ADXA Quarterly Meeting](#) — March 2, 2019—at Russellville Hamfest

From the President Joel Harrison—W5ZN

When the time rolls around for our quarterly newsletter I always sit in the shack and ponder what to write. Having the luxury of the ADXA reflector affords me the opportunity to communicate with you whenever something pops in my head so when newsletter time rolls around I always seem to drag out writing my segment until it is way past Glenn's deadline. My apologies for doing so! Most times it takes several days for a topic to come to mind but once I begin typing I seem to go way overboard. It is usually in the early morning when I get started. There is just something about sitting in the shack in the quiet, enjoying coffee and listening to a DX station on the low bands. This morning I am listening to T31EU from Central Kiribati on 160 meters with a very nice signal. I am yet to hear anything out of XX9D in Macau however I was very fortunate to get V84SAA in the log on 160 meters, the last band slot I needed for that one.

What is it about DX that attracts us? To be honest, I'm not sure what the heck would attract young folks to amateur radio today. Of course we all know back in the 60's and 70's (and earlier for some of you old dogs!!) the thrill of building your own station, putting up a simple wire antenna and working a station from far away was not just tempting, it was exciting! Anyone here shout, dance or strut around the house like you just won the lottery after you work a new one? Come on, admit it...we ALL do!!! With today's advanced technology we can sit in front of the TV and watch live color video from Mars. That gets me all giddy. Remember sitting in front of the TV watching that grainy black & white live video of Neil Armstrong stepping on the moon? How cool was that? My kids, who are all adults now with their own kids, can't get excited about that and I simply do not understand it. Sadly I just sit back and remember a line by John Wayne in the movie "Big Jake" near the end just before the big finale when he says to Sam Sharp Nose regarding the decline of Buffalo "Well, times change...."

While not to veer off into a debate about young folks and amateur radio, as that has been an almost "religious" debate for many, many years and still is, I want to focus on ADXA, our members and where we are now. Obviously, we all share a deep interest in DX. We still love the thrill of hearing (and working!) a station from a distant land. Some of us have even had the opportunity to be the DX and operate from afar. Regardless of whether you bought or built your radio, whether you built your antenna from scratch or bought a commercially available one or whether your station is big or small really doesn't matter. What really matters in today's world for us "DX Hounds" is our integrity and how effective you are in operating your station, how well you adhere to the DXCC rules and the DX Code of Conduct. Do you also share your experiences with others?

These have all been a primary objective of ADXA and I am proud of the fact that our tradition not only continues but is thriving with interest and participation today. Yes, times change however our focus has not.

Please plan to attend our first quarterly meeting of 2019. While our good friends in Russellville, a number who are ADXA members, would love for you to attend their hamfest that is not a requirement to attend our meeting. We will fire up officially at 11:00 AM with K5EJ presenting on how to DX on a budget. A very timely and important topic. General business meeting will follow. As usual, before and after there will be plenty of DX stories relating to the thrill of victory!

C U in Russellville March 2.

73 Joel W5ZN

Don't be "That" Guy K5UZ

Don't be "That Guy"... By David Norris P.E. (K5UZ) ARRL Delta Division Director

When it comes to DXing or contesting, we tend to want larger antenna arrays and larger towers are of course needed to support them. We as DXers tend to push the limits when it comes to "Aluminum per cubic foot" on our property and we must be careful not to overload our antenna support structures. The tower is of course quite important and it figures in our discussion here today as it relates to the forces in a guying system; hence it cannot be ignored as one half of the equation. Balance is required to prevent failure of the entire system or we wind up with the result below. Too much guy and not enough tower to stop the results of Euler bending (Kl/r) or buckling type failures in the system can be seen in the picture below. Let's look closer at the guy and the guy anchoring system as part of our tower and guying discussion and perhaps I can pass on some sound engineering, practical knowledge and tower building experience. Of tower building experience I learned much constructing my 140' rotating 55Ga tower with large stacked yagis on 40, 20 and 10m. It far exceeded anything I had done in the past with 100 and 75 foot 25 Ga masts. So off we go a guying!



N5QS photo

First Things First!

There are a number of things one must do in preparing for a large project like erecting a tower. Planning is the key and as I say "Failing to plan is planning to fail."

- Make sure there are no restrictions on deed!
- Check with Municipal & County Entities! PRB-1 helps us here.
- PLAN out your tower installation! Make sure everything is sized correctly for the array/tower.
- Make sure there are no restrictions on deed! This can be a real problem and legal issue.

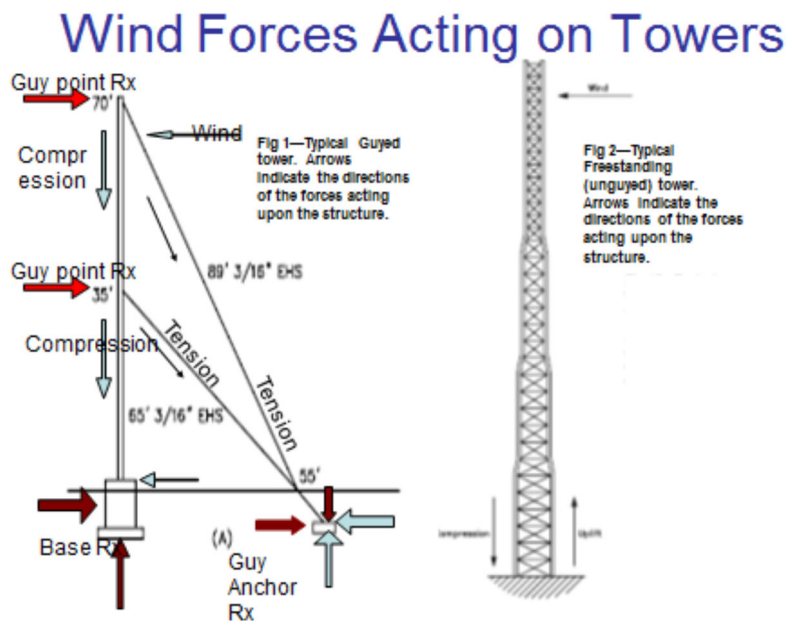
Don't be "That" Guy

K5UZ

- Conduct a thorough site survey. Look for possible problems and make sure it fits on the lot.
- Always follow Manufacturer's recommendations. Do not overload the components of the tower system.
- Consult with a Professional Engineer.
- Submit any required plans or drawings.
- Safety First! Plan out the erection process.

Forces at Work

A DXer's amateur Yagi antenna installations can produce up to several thousand pounds of force in the guy cables. As shown Figure 1, the forces distributed in a guyed tower are somewhat more complex than those in the freestanding tower or mast shown in Figure 2; however they are essentially the same. One side or component in the system is in tension while the other is in compression. In the guyed system it is one or two sets of guys (depending on the wind direction) put in tension while the tower or mast itself is in compression from wind forces acting upon the array and the support structure, and self-weight or dead load force resultant from gravity. Hence the need for balance in our antenna support system is critical. Seismic forces should also be considered in design and construction but that is beyond the scope of this article and will be taken up in a later epistle.



Norris Engineering – ARRL Antenna Book

As further shown and explained in Figure 3 there are more forces at play with the antenna system and tower. I like to use the analogy of an old sailing ship which is appropriate for a descendant of Colonial privateers: the Yagis mounted tend to act as sails and the tower acts as a mast while the guys act as the stays and the rigging supporting the masts. We must determine how much force will be required to support the mainsail and topsail and size the members and guying cables accordingly. We can determine this sizing from some basic information and a little calculation.

Don't be "That" Guy K5UZ

First, we must determine the weights of and surface area of the antennas going on the tower. This will determine the tower size and subsequently allow us to size the rest of the components in the tower system. Don't forget the guy cables weight. Second, we need to know the surface area of the tower, its weight and again the surface area of all antennas and accessories mounted on it. The guys typically are negligible for wind resistance but can be added in for completeness of the analysis and EHS (Extra High Strength Steel) cable will weigh more than Phillystran. Third, we need to know what our height is and accordingly how far out we need to space our guy anchors from the tower. Typically it is recommended to space the guy anchors out to between 60 to 80% of the tower height or far enough out to miss the "stacking bay" if multiple Yagi's are mounted on the tower. This will set the guy cable angle which in turn can either reduce or increase the load capacity in our guying system.

Please refer to Figure three again for a good breakdown and what is happening on a tower in a breeze. This is a good and concise model and description of what "creates" the forces on the mast and tower which translates to our guying system. For most small and medium sized arrays a simple wind resistance and force calculation will do for the quick dirty guy and tower sizing.

Force, $F = A \times P \times Cd$; Where A = The projected area of the item,

P , Wind pressure (Psf), $= .00256 \times V^2$ (V = wind speed in Mph)

Cd , Drag coefficient, $= 2.0$ for flat plates. For a long cylinder (like most antenna tubes), $Cd = 1.2$.

Note the relationship between them is $1.2/2 = .6$, not quite $2/3$.

Wind Forces Acting on a Yagi

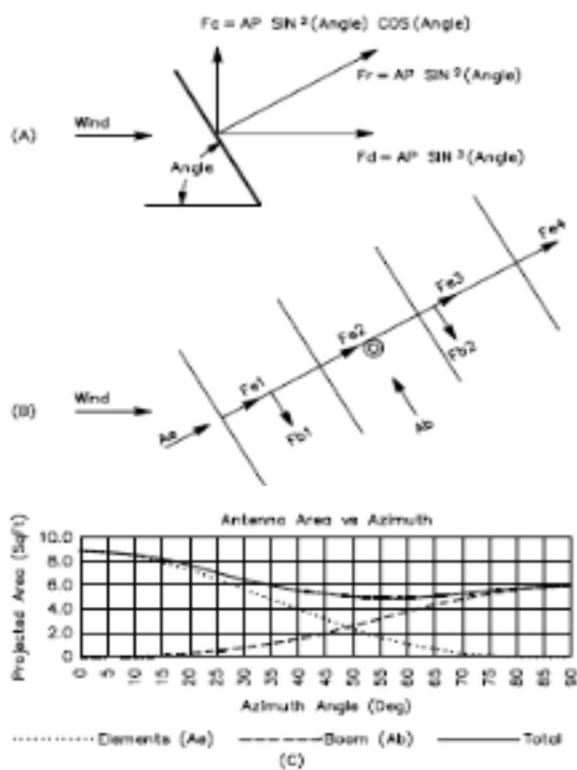


Fig 3—Description of how loads are developed on a Yagi. At A, Fr is the resultant force from the wind load on a generalized member. Fd is the load acting downwind (drag) that creates the load on the tower. Fc is the lateral component of the wind load. The term A is the flat projected area (FPA), which is the broadside area normal to the wind. The term P is the wind pressure. At B, Ae is the total element area, while Ab is the total boom area. All the loads due to the wind act normal to the antenna sections—the force on element #1 ($Fe1$) acts along the axis of the boom, for example. At C, a plot of the effective FPA as a function of the azimuthal wind direction for a Yagi, ignoring drag coefficients. The Yagi in this example has 9.0 square feet of element FPA and 6.0 square feet of boom FPA. The worst-case FPAs occur with the beam pointed in the wind and with the boom broadside to the wind. To determine the actual tower loading, the actual drag coefficients and wind pressures must be used.

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However, the larger arrays will require a bit more work and sometimes even the smaller arrays may require more in-depth calculations and analysis from local zoning officials.

Doing the Math

There is a very complex set of equations for calculating the forces being exerted on a tower system and its guy cables. There are however free software tools available that can give good solutions for an amateur tower installation. One such online tool that I take advantage of is a program called WIN_LOD by Will Rynone Ph.D. P.E. an engineer and software developer at the Naval Academy. This is a good and fairly easy modeling tool to use with some basic data inputs and parameters that yield multiple solutions for cable tension at various angles for the cable with the corresponding distance for the guy anchor point from the tower base. Also, there are newer freeware packages available as well and I will touch on those later. Wind speed increases with structural height so the higher the antenna the more force on the tower. Yes, you can stack the antennas on the tower in the program, and you can use this to adjust the guy anchor distances to better fit the lot and to economize your installation. Please see the WIN_LOD solution output for the mid guys on my rotating tower. This is the force generated from the bottom M2/KLM 20M6 at 66' and the tower.

Guy Calculations

KLM 20M6 @ 65' 130' Tower

| X | Radius (Feet) | Wire Lnth (Feet) | Mast Ang (DEGREES) | Ground Ang (DEGREES) | Guy Tension (#) |
|----|------------------|---------------------|-----------------------|-------------------------|--------------------|
| 1 | 130.0 | 183.8 | 45.00 | 45.00 | 2309.1 |
| 2 | 123.5 | 179.3 | 43.53 | 46.47 | 2370.7 |
| 3 | 117.0 | 174.9 | 41.99 | 48.01 | 2440.8 |
| 4 | 110.5 | 170.6 | 40.36 | 49.64 | 2521.1 |
| 5 | 104.0 | 166.5 | 38.66 | 51.34 | 2613.8 |
| 6 | 97.5 | 162.5 | 36.87 | 53.13 | 2721.3 |
| 7 | 91.0 | 158.7 | 34.99 | 55.01 | 2847.3 |
| 8 | 84.5 | 155.0 | 33.02 | 56.98 | 2996.0 |
| 9 | 78.0 | 151.6 | 30.96 | 59.04 | 3173.6 |
| 10 | 71.5 | 148.4 | 28.81 | 61.19 | 3388.1 |
| 11 | 65.0 | 145.3 | 26.57 | 63.43 | 3651.1 |
| 12 | 58.5 | 142.6 | 24.23 | 65.77 | 3978.9 |
| 13 | 52.0 | 140.0 | 21.80 | 68.20 | 4396.5 |
| 14 | 45.5 | 137.7 | 19.29 | 70.71 | 4942.6 |
| 15 | 39.0 | 135.7 | 16.70 | 73.30 | 5682.3 |
| 16 | 32.5 | 134.0 | 14.04 | 75.96 | 6732.2 |
| 17 | 26.0 | 132.6 | 11.31 | 78.69 | 8325.7 |
| 18 | 19.5 | 131.5 | 8.53 | 81.47 | 11007.2 |
| 19 | 13.0 | 130.6 | 5.71 | 84.29 | 16409.5 |
| 20 | 6.5 | 130.2 | 2.86 | 87.14 | 32696.9 |

I use WIND_LOD, an engineering software program by William Rynone, Ph.D., P.E. to determine cable stresses based on my wind analysis on antennae and tower.

I also use AutoDesk Structural Desktop and Civil Design software along with STAAD Pro finite element analysis to design antennae and tower structures.

K7NV has some good information on his page and he points out Grapesoftware and a finite element pro-

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gram they offer which is more readily obtainable than WIN_LOD and STAAD and is free. K7NV offers a good detailed tutorial on his site as well and I agree with his methodology. The Grapesoftware program is easier to use for non-engineers and gives good results. I have included these pages in my resource links below.

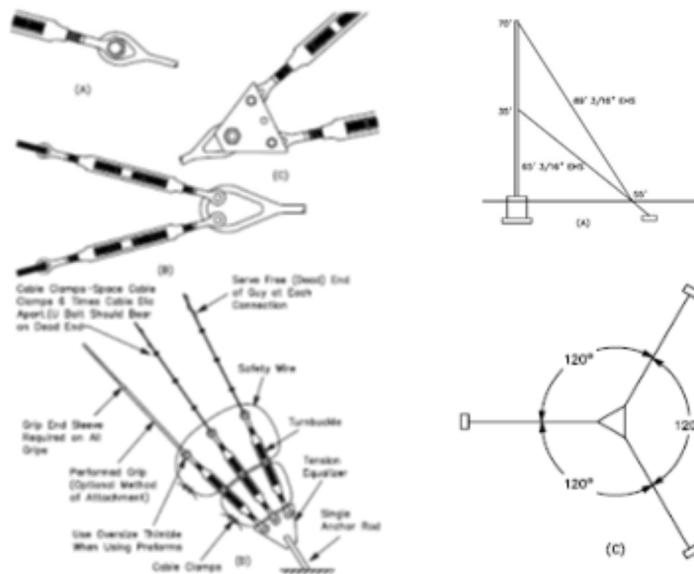
With such software tools the DXer can optimize the antenna farm budget and be well on the way to constructing an economized array. Again if in doubt, consult a professional engineer to review the situation.

Here are a few quick tips on guying the tower:

- Use the best cable you can afford!
- Wind speed increases with structural height on the tower.
- Closely inspect ALL used cable- Steel cable tends to rust from inside out. RUST IS NOT YOUR FRIEND.
- Use Galvanized EHS steel or Phillystran. Cheap crap = future catastrophic failure.
- Use proper connections and hardware. Do not go cheap here either.
- Buy quality turnbuckles!!!!!!
- Phillystran is electrically invisible and makes for more accurate antenna modeling.
- Use lower runs of equivalent EHS steel cable at the bottom of Phillystran guys. (fire and vandal insurance)
- Do Not "Under-Size" the cable to save money!
- If the tower collapsed did you save money?
- Sweat the "Details"! Little things can have big consequences.

Let's Build This!

Guy Connections!



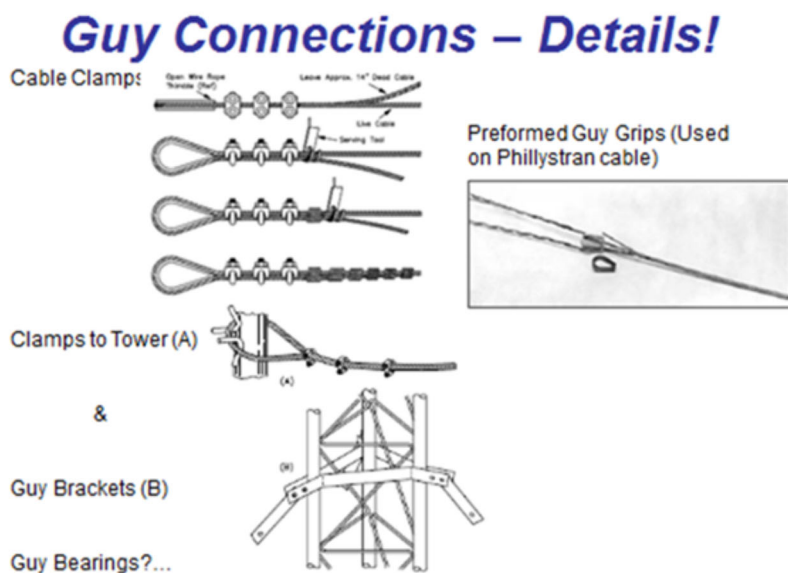
ARRL Handbook- Rohn Towers Inc.

Radially space the guys at 120° apart for three guy layout as shown in the diagram. I would employ the

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use of a transit, theodolite or total station survey instrument to accomplish this part of the task. I also shoot in the lot or yard area of the property and layout the tower to those dimensions first in Auto Cad to make sure it all fits on the property and to design my collapse mechanism, then I stake it out on the ground. Be sure to space the guy anchors far enough away from base to ensure stacking clearance and correct angle of the guys to relieve cable stress in high wind loading situations. Smaller arrays and towers are much more forgiving than larger taller stacked arrays the big guns like W3LPL and K3LR utilize so a bit more tolerance is acceptable in layout. However, sloppy and structurally unsound practices should not be used. Try not to vary too much from the 120-degree spacing. When towers fall they can kill; have a factor of safety designed in your installation.



Rohn Towers Phillystran Co

Connections are one potential weak link many amateurs over look. Buy good hardware and follow recommended connection practices as shown above. The ARRL Antenna Book and the ARRL Handbook are excellent references for practical installation techniques for guy connections. Rohn Towers is also an excellent source of data and tower guying information as well as Phillystran as they offer good information as well. All can be found on line.

Also, one should plan to build the guy system to meet clearance needs or requirements for the area. We wouldn't want Bossie the cow, the John Deere mower or the kids running into the guys. Again, be sure the guys are strong enough to hold entire system, i.e., big Yagi's catch big wind and act as sails as previously shown. Lastly, be sure the guy anchors are sufficient to withstand the uplift as well as the lateral "pull" exerted on them. Let's briefly examine this problem.

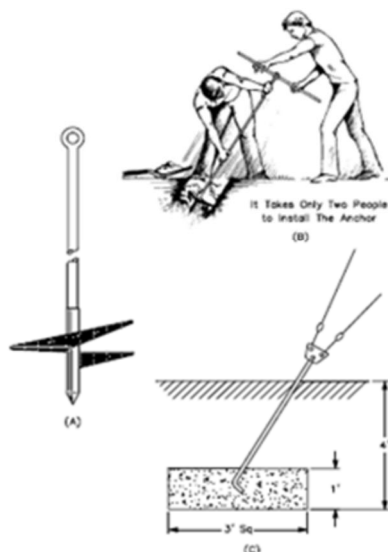
Bury that Sucker Bubba!

Guy anchors can be simple, buried and concreted "screws" or even complex composite beam-column designs. Regardless of type, be sure it has sufficient capacity and counter weight to not lift up or pull out. Soil type is also another consideration to take in to account and for goodness sake get that old rotten cot-

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tonwood tree cut down before it falls on the north set of guy cables and shipwrecks the entire station! Again, plan well in anticipation of odd things occurring and size your anchors to fit the array. Below are some simple techniques for guy anchoring with soil screws and concrete anchor rods.

TYPICAL GUY ANCHORS



Rohn Towers Inc. – ARRL Handbook

I went with composite beam columns with reinforced concrete spread footings (W 8 steel beams in conc. Forming a strong composite beam-column for support some six feet off the ground) in order to get guys away from the dogs, the kids, the deer and my John Deere. The spread footing really can help you with the economy of the installation. Whereas some amateurs simply pour cubic yards of concrete in the hole and set a Rhon guy anchor in the fresh concrete, I decided to use the good Arkansas stiff clay to add mass to the anchor. Looking at concrete, which has a unit weight of approximately 150 pounds per cubic foot or pcf while a good, normal clay soil with reach a compacted density or unit weight values of 120 – 135 pcf with a good plasticity index (it's sticky). So why not put that spoil pile to good use and save money on concrete? I must caution the reader at this point to be careful with the soil type and to thoroughly compact the soil going back on top of the spread footing as to insure it meets the calculated weight required and acts as a more solid mass in the guy anchor system. Silty and sandy soil is not suitable for adding mass, but the concrete spread footing may work well in silty sandy granular soils. But I digress. Reinforcing steel is also important in this design as to form the solid "bottom of the bowl" in the guy anchor system. This technique economizes the quantity of concrete on a guyed tower installation. This also illustrates a method of "short guying" the tower.

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The guy anchor shown above holds a 145' rotating tower with 2 M2/KLM 20M6 Yagi's, two 40' long boom 5el 10m Yagi's, a 20M3 and a 2 el "shorty on 40" at 150'. The footing, the compacted soil and the composite beam column all work as a system. Note the neatly fabricated guy cable equalization plate system and the connections. Shear connections must be utilized on the wide flanged section (I-Beam) to bond to the concrete.

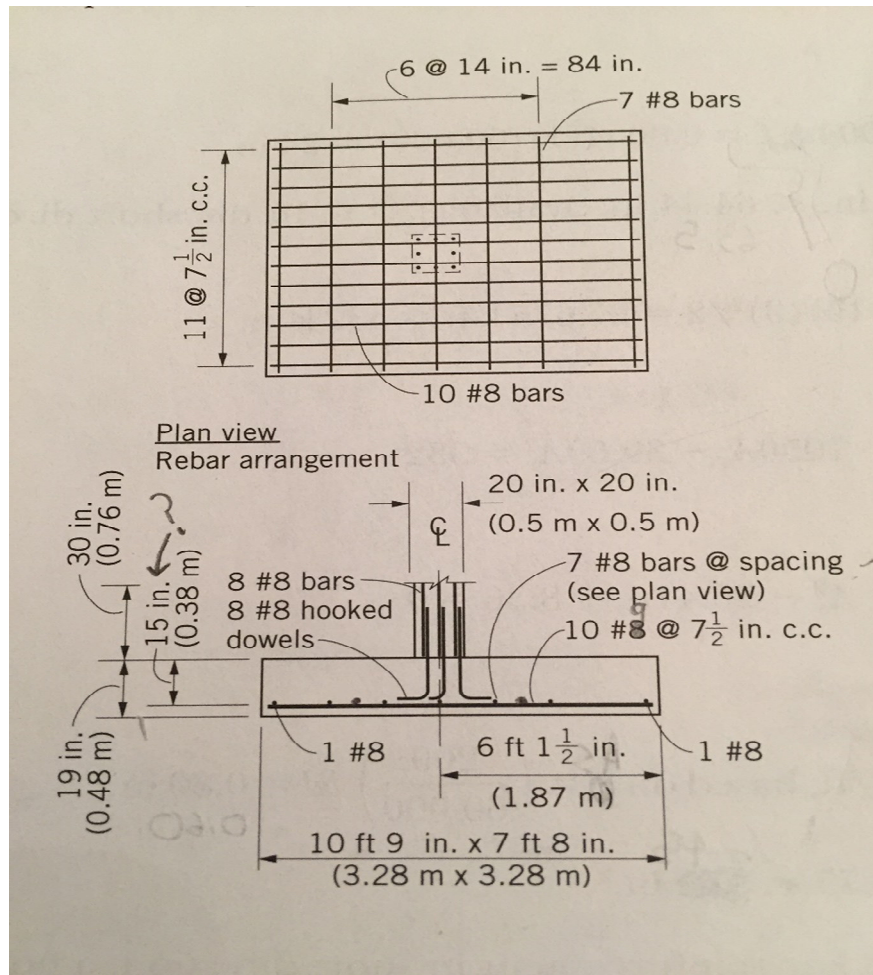
As can be seen in the pictures of the guy anchor it does require effort, however this is the extreme and again I stress smaller arrays can utilize similar techniques and methods on a proportionally smaller scale. The key concept on guy anchoring is getting sufficient mass and stability in the soil enough to resist the uplifting and lateral forces acting in the guy. Remember, it is a tug of war with nature.

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K5UZ photo.

The composite beam column is poured monolithically with the spread footing. The concrete keeps the wide flanged beam (I-Beam) from corroding in the acidic soil. The footing is a 6' x 6' x 1.5' thick double mat steel reinforced with 4' of compacted clay on top



An example of a spread footing from a plan mark-up. This is for a larger structure. Norris Engineering

Other Soil Issues

“Oh but Dave, I am sitting on solid rock and can’t dig a hole for a big guy anchor.” That’s not a problem either. Remember, there are two forces we are countering in the guy anchor: uplift and lateral sliding. One can anchor in solid rock with either a rock anchor system or a big block of concrete that can be scotched or even connected to the rock with dowel bars epoxied grouted (glued) into the rock face to stop sliding. There are a number of good commercial epoxy grout products available at the local hardware store, Home Depot or Lowes for dowel anchoring. We can determine the pulling force on the guy cables so by simple trigonometry and algebra so calculating the anchor size is simple enough using the 150 pcf weight of concrete in a large enough block to give a decent factor of safety. Forming can be simply constructed of inexpensive grade plywood and 2 x 4 economy studs. One could simply place a hooked bar in the mass of concrete for the guy cable connection as shown in the diagram for Typical Guy Anchors shown previously or more elaborate systems.

Short Guying

Short guying is a method of fitting what would normally be a long run of a guy cable or cables in a shorter

Don't be "That" Guy

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space. This is accomplished by elevating the guy anchoring point to a predetermined height that holds the guy at a desired cable angle to achieve a satisfactory loading and reduced stress in the cable. I previously mentioned the obvious benefits of the elevated guy anchor attachment point for mowing, but this concept can be used in small lots where short guying can have an advantage in tight real estate situations. It could mean the difference between an amateur having a tower and being QRV or not having a tower and going QRT. Guy anchor attachment points can be designed for heights from as low as three or four feet to as much as 20 feet. Higher guy anchor attachment points require better analysis and I would recommend the members and materials used be reviewed and approved by a Professional Engineer.

The end result is a safe, durable antenna support giving the amateur many years of reliable service. There are certainly more in depth aspects of the design steps mentioned in this article with respect to calculated factors of safety; however this will get you headed in the right direction for that next big project. This is a big investment of time and money for most DXers and Contesters so be efficient, be thorough and be safe in your tower design and construction.



K5UZ Photo

73 ES DX

DE K5UZ

Resources:

<http://www.m.rohnproducts.com/technical-info/basic-tower-fundamental.html>

<http://k7nv.com/notebook/topics/windload.html>

http://www.grapesoftware.mb.ca/grape5_003.htm

<http://k7nv.com/notebook/towerstudy/towerstudy1.html>

Miscellany

FOR SALE

Folks, I have a used Force 12 4BA antenna that belong to Lenny, K5OVC. When he left AR he asked me to sell it for him. I marked all the connections and put it in a box. I Have now had it in the box in my garage for about 5 years now. Lenny has come down to \$250 asking price and I would like to get it out of my garage. If you're interested please give me a call on (501) 760-1181 or e-mail me at k5dv@arri.net. Thanks for your time. Dave, K5DV

DXAC Appointment

Just found out that one of our own has been appointed to DXAC for the Delta Region—Steve Rutledge, N4JQQ

C6AFP in The Northern Bahamas

Steve, N4JQQ

Shortly after the DX bug bit me hard in the mid 80s, I decided to put together a small dxpedition. My brothers and I had inherited our father's home at Treasure Cay on Great Abaco Island, The Bahamas. It was a lovely place on one of the most beautiful beaches in the world. My idea was to attempt the 10 meter contest. I hauled down a radio, power supply and a Cushcraft AR-10 vertical. Getting my license was no problem but when it arrived a few days before lift-off, 10 meters was omitted as an authorized band. Rather than fly into a panic, I contacted BATELCO, the Bahamian licensing authority who really didn't understand amateur radio. Getting no commitment, I contact a Bahamian op who assured me what I thought was correct was in fact so.

Most of you will recall that we were just getting into the peak of cycle number at this point. Someone had told me that C6 would be a needed country for new ops as well as Asian countries. That was an understatement.

I worked stations non-stop well into the evening hours as the JA's came up. It was unbelievable. My op was all phone as I was a General class op licensee and didn't have the experience to operate high-speed CW. Logging manually was hell. I was there alone. I wondered how I was going to eat much less use the bathroom. It was a wonderful experience and I returned home to find a huge basket of QSL cards, most from JA's, waiting at the house. It was truly amazing.

I also learned about duping my log manually, no computers at this point. That was quite fun, pun intended.

I subsequently did several more contests from our home there sometimes bringing along other ops, the late W8LU, Ken and Owen, K6LEW/K3CB, also an SK and many other great ops.

In the meantime, I became interested in six meters and attracted some well-known ops who wanted to try that out. John, WZ8D, visited several times and constructed the first C6AFP beacon. It was about two watts with the parts in a shoe-box and used a Cushcraft AR-6 antenna. The only problem was the beacon was on 50.060 which conflicted with US beacons.

As luck would have it, my two brothers wanted to sell the house and I couldn't buy them out. So, this QTH was no more.

I was able to shift the beacon to C6AGN's home on Green Turtle Cay where one of my brothers also settled. As time went on, the beacon became a focus of great interest, especially to ops in EU.

A new beacon was built with a plastic case this time but still on a bad frequency with low power. Soon, I was contacted by the "beacon project" and they offered up a higher power beacon on 50.040. This was great. However, this particular unit was plagued with technical issues. Finally, Mike, W8IF, came to the rescue and provided a high-power (40 watts) beacon. It worked great from C6AGN's QTH until he became an SK. At this point, I moved the beacon to my brother's historical Loyalist cottage in the settlement of New Plymouth. I was concerned about RFI and the AR-6. No one said a word and I have been getting good reports for many years.

My ops from C6 are far and few between these days. While I'm at my brothers two or three times a year, we are usually on the ocean from dawn to dusk spearing fish on the reef, gathering Conch and stealing one claw each from the Stone Crabs. Then we have to eat all this. It is a tough life.

Oh, did I mention I have the only two-meter repeater in the country. It is on a government tower at 160' but that is an entirely different story.

If you want to go to The Bahamas, my recommendation is to stay far away from Nassau. The Northern Bahamas, Abaco and its beautiful cays (pronounced keys) can't be beat.

Gud DX,

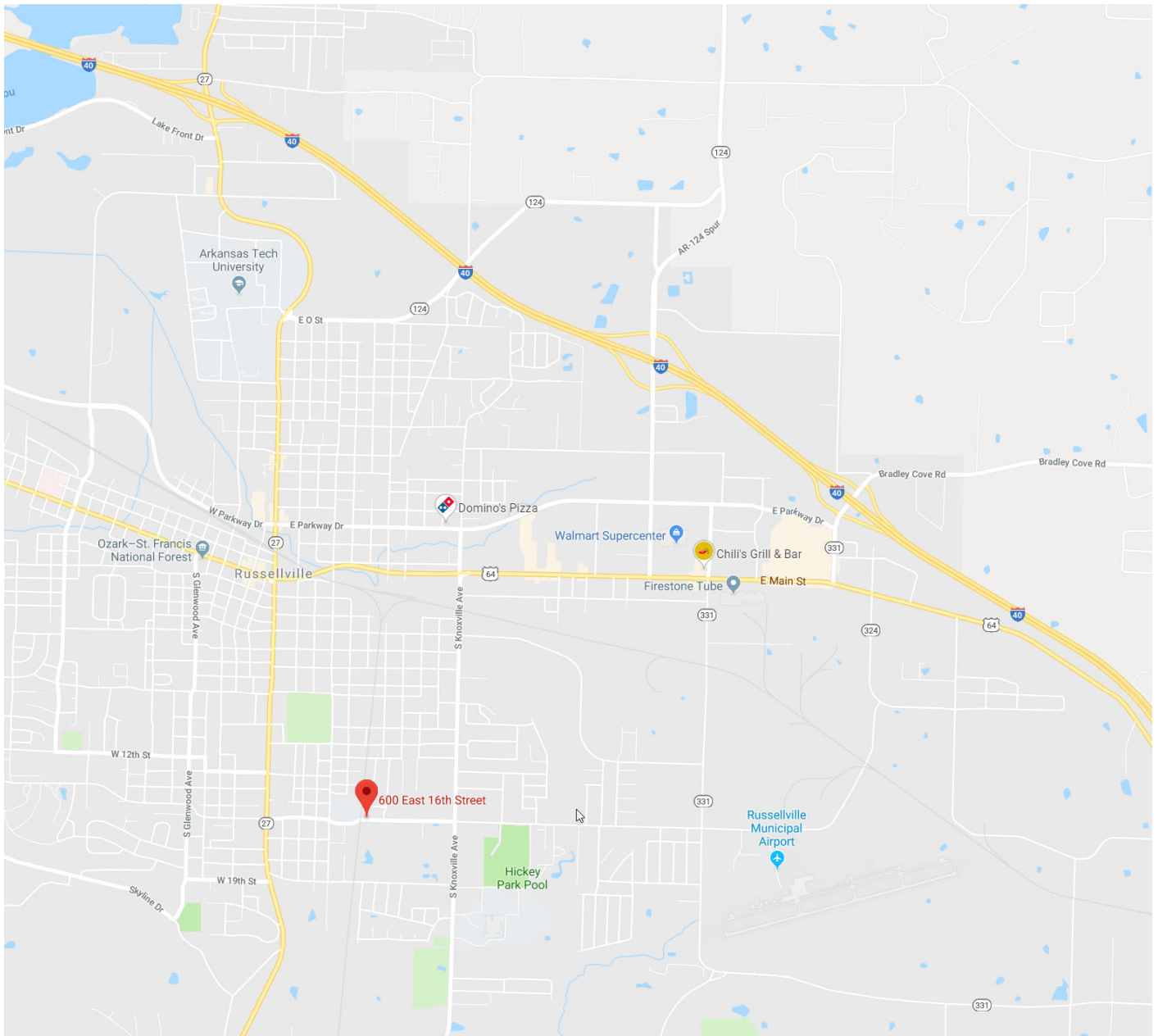
Steve, N4JQQ/C6AFP

Directions To Next ADXA Club Meeting—March 02, 2019

**The L. V. Williamson Boys & Girls Club of the Arkansas River Valley
600 East 16th Street
Russellville, Arkansas**

ADXA business meeting starts at 1100A

GPS coordinates - N35° 15' 49.0" W093° 7' 35.0"
Map courtesy of google maps



ARKANSAS DX ASSOCIATION

MEMBERSHIP/RENEWAL APPLICATION

BUSINESS NAME

President: Joel Harrison, W5ZN
Vice President: Pat Patterson, W5VY
Secretary/Treasurer: Glenn Wolf, N5RN

Club Mailing Address:

E Glenn Wolf Jr
210 S Estates Cove
White Hall, AR 71602



We're on the web
www.adxa.org

CALL: _____

LICENSE CLASS: _____

APPLICATION: ☐ NEW ☐ RENEWAL

NAME: _____

PHONE: () _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP: _____

EMAIL: _____

DXCC MEMBER? _____

ARRL MEMBERSHIP EXPIRES: _____

SPONSOR'S CALL _____

ARRL MEMBERSHIP REQUIRED

(ADXA IS A 100% ARRL AFFILIATED CLUB)

VOTING MEMBERS MUST HOLD DXCC

VALID INTEREST IN DX REQUIRED FOR ASSOCIATE (NON-VOTING)
MEMBERSHIP

YEARLY DUES **\$25.00**, Family membership **\$35.00**

Dues can also be accepted via PayPal:

Using your PayPal account send your dues payment to

n5rn@adxa.org

**Make sure you select the personal tab and identify this payment as a gift
or there will be a surcharge.**

MAIL APPLICATION TO:

E Glenn Wolf, Jr., N5RN
210 S Estates CV
White Hall, AR 71602 -8216