



2022-2023 DXpedition of the Year

**Czech DX Pediton
2023**

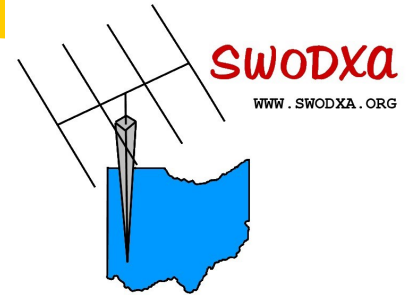


République du Congo

TN8K



the exchange



SouthWest Ohio DX Association

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The Prez says.....Apologies

My apologies to one and all. I really underestimated the amount of time needed to get the May edition of the Exchange out the door at the same time as the DX Dinner and Hamvention. I decided to combine the May and July editions. With proper planning and some luck, this won't happen again!



If you missed the DX Dinner, you really missed a terrific event. Other than just generating significant funds to help DXpeditions, the presentations at the dinner, the “networking”, and the overall event were really first class. We ALL need to thank the cast of characters who were involved in pulling this off. This would include Mike—W8RKO, Mindi—KC8CKW, Kevin—W8KJ, Dwight—K4YJ, Jay—K4ZLE & XYL Gwyn, Joe—W8GEX, Janet—W8CAA, Rob – W8MRL, Brian – AD8FD, Craig – KD8SMS, Tom – NR8Z, Pat Yockey, (XYL of K8CMO), and Karen Salyers (XYL of AJ8B) I am sure that I have left someone off of the list. Please drop me a note if I left someone off – it certainly was not intentional!

As you know by now, TN8K was voted the DXpedition of the Year. An article describing their DXpedition is included in this edition. As of the publication date, they had not yet received the plaque, but they were thrilled with the news!

The highlight of the DX Forum, in my humble opinion, was the presentation given on FT8WW by Paul, F6EXV, while in France. Thanks to the General Chairman, and SWODXA member, Jim, AB8YK, for ensuring that the internet and the monitors were top quality. It really was like Paul was in the room with us. All of the presentations were excellent. The forum ended with the announcement that Jay, K4ZLE, was handing the DX Forum reigns off to Brian, AD8FD. Thanks, Jay, for years of leadership on this valuable part of the weekend!

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Prez Says (cont.)

We have 5 new members to welcome to the club. Details are included later in the newsletter. Drop them a note or a QSL card to say “Hello” and “Welcome”. Billy, AA8KY, and Joe, W8GEX, have been very active in contacting and recruiting new members. Thanks for all your help!

Our newest regular contributor, Randy, ND0C, has the first installment of his QRP DXing & Contesting in this issue. It is outstanding and we are really fortunate to have Randy as a regular contributor.

We have an article entitled “Planning Antenna Systems for the Little Gun Station” by Jim, K9YC. I found this to be an excellent article and will keep it around as a reference. Thanks to Jim and the Northern California Contest Club for permission to reprint it.

From our “northern SWODXA office” in Minnesota, Scott, K0MD, shared with us his experiences at the Visalia DX event as well as Hamvention. Very insightful and entertaining to read. Thanks Scott. I am making tentative plans to attend Visalia next year. If anyone else has thoughts along those lines, let me know.

Keep an eye on your email client in July. Joe, W8GEX, and I have been working on a couple of online surveys that we really need you to complete. Currently, we have 3 surveys put together; station equipment, antennas, and about our club. The only way we can continue to deliver what you need is to know what you want. This is a crucial part of our planning process and we really need your input.

Many of you knew one of our founding members, Harry, W8KKF (SK) later AC8G. Harry passed away in January. His son Eric, now W8KKF, submitted a moving tribute to Harry complete with a list of Harry’s accomplishments, which are many. My first time with the club was in the late 80s for a few years. However, I did not really get to know Harry at that time. It was truly my loss that I never knew this kind man and excellent operator.

The next edition, the September edition, will be dedicated to 160M. Please send me any success (or failure) stories you have regarding Top Band. Any equipment you have experimented with or antennas you have built would be great. Especially, articles about Beverage antennas are always welcome.

73 for now and stay safe this summer.

SWODXA Club News

Upcoming Club Dates and Topics

Meeting Date	Topic
September 14th	The CQ DX Marathon by Mark Wohlschlegel, WC3W
October 12th	All Things CQ WAZ and Don Quixote by Jose Castillo, N4BAA
November 9th	3D Printing - It's More Than Just a Printer" by Logan, KE7AZ
December ?th	Christmas Party

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Images from the DXdinner®



Jay, K4ZLE, executing his emcee duties flawlessly.



**Adrian, KO8SCA, as the Keynote Speaker.
He was funny, informative and great!**



**Adrian, KO8SCA, as the recipient of the CQ
DX Hall of Fame Induction. Well deserved!**

Images from the DXdinner®



K4QPL/VP5M—Jim announcing the VP5M raffle—“Tickets are still available”



The VP5M award winner—NR8Z—Tom! Congrats to our former president and the 2023 W8OK Award Recipient



Adrian, KO8SCA, as the Keynote Speaker. He was funny, informative and great!



Adrian, KO8SCA, as the recipient of the CQ DX Hall of Fame Induction. Well deserved!

Images from the DXdinner®



K3VN—Arecio being inducted into the CQ DX HOF



Bill, AJ8B, announcing the DXpedition of the Year Winner



Ray, N9JA, our partner from Icom, draws the grand prize ticket. "And the winner is..."



Martin...W0UCC

Images from the DX Forum



Packed House Saturday morning watching the FT8WW presentation



Jay, K4ZLE, at it again in a dual role—emcee of the DX Forum and Team Member/presenter of the CY0S—Sable Island DXpedition

SWODXA Club News (cont.)

The results are out for the December 2022 ARRL 160 Meter CW contest. I won first place in Ohio, in the Single Operator Unlimited, High Power class. I also placed 3rd in the Great Lakes Division and 45th in the US/VE.

I made 761 contacts over two nights for 101,728 points. Not my best score, but conditions that weekend were not great on 160.

The 160 meter station is an Icom IC-7610, Drake L-7 amp, and the antenna was an inverted "L" supported by my 30' tower and a tree.



Ernie W8EH

Congratulations to K4YJ Dwight. He has had a solid contest year. Dwight received his ARRL Sweepstakes "Sweep Mug" and then received his certificate for finishing first in the CQ Marathon for the 8th Call Area in the Formula-100W category.

Well Done Dwight!!



SWODXA Club News (cont.)

Speaking of K4YJ... My wife and I went to the Cuyahoga Falls Hamfest. We rented a table and it ended up just across from the VE testing entrance. Before one of the test sessions one of the guys that was going to take the test stopped by and browsed around my table. Of all of my items, there was a couple small SWR meters that he was looking at. He look some more then it was time for him to go in and he said that he would get one of them after the test if they were still there. Well after a good while he came out of the test happy as could be saying that he has passed the test. he started to walk away and I stopped him and wait a minute, here take this and congratulations and gave him the meter. He was so happy, and it was nothing fancy or anything, just a small swr meter. Well, a few days later, I was reading on the Ohio ham radio Facebook page and notice a note form a guy thanking someone that gave him a meter. It really felt good to have touched someone.



On a second note, there was an elderly guy looking at one of my Astron power supplies. He really wanted it and of course asked for lowest price. After looking at him, I gave him a price way below what I was asking and he looked in his wallet and said he could do it. Well he asked to keep it there till he came back. Well I put the power supply under the table and he came back about an hour later with someone to help him carry it. He fumbled to get the money out of his wallet and thanked me for holding it and for the deal. He was also looking at two of my Kenwood external speakers. He was looking at them really hard but he saw the price and didn't have enough to get one. He really wanted one badly. I picked them up and asked him which one he like the best and he said that one (the one in my right hand). I handed it to him and said it is yours please enjoy it. He almost cried and said God bless you both and thank you!!!

SWODXA Club News (cont.)

New Member—Craig Kenley, KD8SMS

My name is Craig Kenley, I am from Dayton Ohio. I first got into radio with my grandfather in the sixties. We had CB radios and talked everywhere that we could at the time. I got interested in Amateur radio and received my first amateur license in 1968. I remember the thrill of talking to MARS stations located in Viet Nam a few times.

I went off the air for several years while I was in the Army and running a business. A few years ago several of my friends encouraged me to get back on the radio. I bought and worked on radios for the fun of getting the rigs back on the air. I sold over 50 radios on EBay, mostly tube radios. I got licensed again in 2012 and have a small rig on 10 meters.

I have went to Hamvention almost every year since 1978. I am studying to get my Amateur Extra License. I have attended the DX Dinners for several years and volunteer with Bill Salyers (AJ8B) passing out tickets. I thank you for allowing me to join the DX club.

73's

Craig Kenley KD8SMS

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New Member— Ken Moak, KM8AM

Hi, I'm Ken Moak, KM8AM, and I've been interested in radio since I was five (1961). After meeting my Elmer, WA2URP in 1970, I was a shortwave listener until licensed in 1976. Learned about Ham Radio (HR) by listening to Hams using Amplitude Modulation (AM). Always been interested in all modes and bands. AM has been my primary love – hence my call suffix.

Today I operate AM, SSB, CW and FT-8. My current main station consists of a multi-two contest station that we built for my XYL, Karen (KM8Q) SK. We have a Flex 6700, a 6600M, two Flex PGXL amps and Flex antenna tuners. Other stations include: Flex 5000, Icom IC7700, IC-7000, a Collins 20V AM broadcast transmitter converted to 160, 75, and 40 meters; and many others. The antenna farm consists of four towers: 170, 104, 70, and 30 feet. Additionally, a full size 160 vertical (120 ft), a satellite tower, two small 6 meter towers (18 and 45 ft), and a 35 ft South American-focused tower are in the works. I joined the USAF in 1975 as an airborne radio/radar technician and was subsequently sent to Purdue for a BSEE and was commissioned in 1985. Spent 23 years on active duty in many unique assignments and retired for the final (3rd) time as a contractor in 2010. The most exciting thing regarding HR in my life was meeting Karen. She was licensed in 1977, and we loved each other and HR for over 43 years. We had countless HR adventures as we traveled with the USAF. My two sons, William (KC8KEE), and Kenny (KD8DIW) are both Hams and graduated from the USAF Academy. My other hobbies/interests are extremely varied and include farming, woodworking, metal machining/fabrication, anthropology, philosophy, and history.

73,

Ken, KM8AM



New Member—Jason Warren, WE8L

I grew up in Kentucky and currently live in the suburbs just north of Cincinnati, Ohio. After two separate careers, one in law enforcement and one in academia, I am now the full-time handyman and chief BBQ chef at home with my beautiful wife, Kathy KE8YHH, and a cat who sleeps at least 20 hours each day.



I was first licensed in 2015 but did not get on HF until I upgraded to General in 2020 and Extra soon after that. Chasing DX quickly became one of my favorite parts of the hobby due to the thrill of the chase as well as the friendships I've found. I've added CW to my skillset so that I can work a contact on any mode and I try to make at least a few contacts CW, SSB, and digital each week to be ready when something new pops up on the cluster.

I do not own an amplifier (yet) but I've had a good deal of success with 100 watts and a constantly changing assortment of wire antennas. My achievements to date include: DXCC Challenge, 8 Band DXCC, VUCC, WAS Triple Play, 8 Band WAS, WAZ, and WPX Honor Roll. I'm a little over 200 on my DXCC mixed and am excited to see how the peak of the solar cycle might grow that number.

Outside of radio, I love to BBQ, fly fish, and I'm a casual watch collector. My wife and I both enjoy travelling so Parks on the Air has been a logical addition to all of our adventures. I'm hoping that our POTA experiences will transition to DXpeditions in the coming years. Most of all, I try to be as good a steward of the hobby and have fun along the way. GUD DX to all and I hope to catch you on the bands.

Jason, WE8L



New Member—Roberto Soto, N9NUQ

I am a new member to the DX Club this year, but my passion for radio and communication has been there all my life. Started with a CB in the car, and this has grown to operating today an Elecraft K4D, KPA500, and a Force 12 Yagi.

A little about myself...

I received my BA from Northeastern University in 1992 with a focus in Criminology, which has been most of my life career path. This is probably why I am drawn to Military Armed Forces, First Responder, Police, Fire, and EMT rescue services alike; I have been an investigator of reported excessive force of CPD members, coercion, violation of the 4th Amendment, domestic violence, and police involved shooting, etc., for over 30 years. Along the way this has led me to collecting patches within these services; I share them today on my QRZ page, and I wear them proudly on a jean jacket. I have received so many patches that I have started a second jacket for my wife to wear, when we attend the amateur “Ham Fest” convention together.

A little about my family...

I have been married for over 40 years (to the same gal; her name is Esmeralda, “Esme” for short); we have four great children (Bobby, Danny, Adam, and Erica)... all have graduated college, and all but one has flown the coop, thus my plan is to keep working until they all leave. All joking aside... I like what I do, so it doesn’t feel like work at times, but the plan is to retire in the next 1-2 years, and perhaps take part in an expedition, while I wait for my life partner to retire too.

The family loves vacationing to Aruba, Cancun, and Puerto Rico; we have a bucket list of other places we would like to explore once we are both retired. Besides traveling and bumming around outdoors, we like fishing, riding UTV/ATV trails, and various other outdoor hobbies.

MOST IMPORTANT TO ME – How will I be measured?

The man that would not stop talking and learning about people and the whole world through DX, and Ham-bands. He shared his love for the radio with all that had common interest. A man with a list of fascinating stories from places yet to discover that would require two or more lifetime to explore; but while still able, will try to experience it in one. Do not leave for tomorrow, what you can do today.



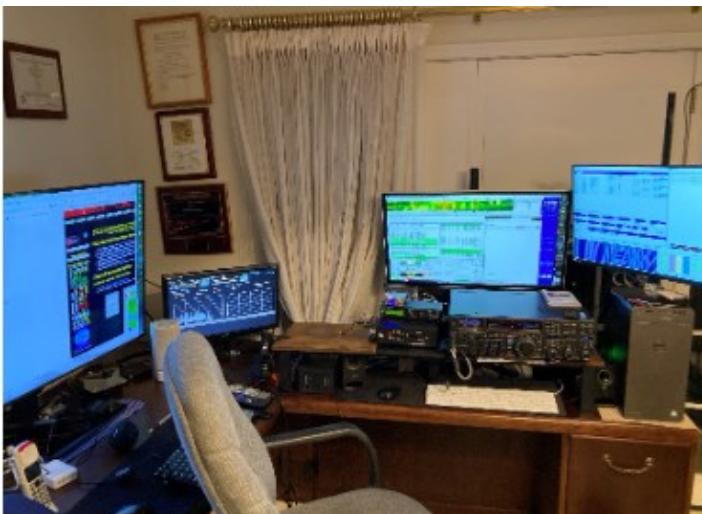
New Member—Steve Weeks, AA8SW

My interest in radio began while I was a teenager. I spent many a Monday morning, into the wee hours, listening for AM broadcast DX. I had a CB walkie-talkie and was friends with a ham but unfortunately, I did not progress to the next logical step of amateur radio licensing since the Morse Code requirement was too intimidating.

Then I lost track of the hobby for several decades. I became a busy lawyer and father and only after retiring in 2018 did I have much time for hobbies. A month after I learned that the FCC had abolished the Code requirement (years before, sadly unbeknownst to me), I passed all three exams and have been active ever since, with over 50,000 confirmed contacts in my first 5+ years.

I am very interested in HF and 6-meter DXing but am not a serious competitor, due to HOA antenna limitations. Although most of my contacts have been on FT8 and FT4, I have operated many modes including SSB, CW, RTTY, PSK31, Q65, FM, SSTV and, most recently, I bounced 6-meter signals up to 900 miles off of meteor trails from Halley's Comet debris using MSK144. I am not a proficient CW operator but have overcome my teenage phobia enough to receive the WAS Triple Play and the CW DXCC. Other awards include 5BDXCC, 5BWAS, DXCC Challenge and WAZ. Below are a couple of HF station pictures.

I am a member of OHKYIN and have taught General Class upgrade classes. Aside from ham radio, hobbies include astronomy, computers and travel, and I am trying to get back into golf after an absence of several years due to a shoulder injury and back surgery.



QRP DXing & Contesting

Randy Shirbroun, ND0C

After Randy presented to our club on QRP DXing & Contesting, I knew he was the person who could provide us with timely expertise on this topic. The most amazing thing about Randy is that he has confirmed over 300 on QRP SSB! He has agreed to provide a regular feature for us. Thank-You Randy! Randy was also featured in a DX Mentor podcast that is available in your podcast app.



An Introduction to QRP: What Is It and Why Use It?

Welcome to the new QRP column! In this column we will explore the various aspects of QRP operating techniques, focusing on how these very low power levels can be used to effectively work DX and successfully compete in contests. It may seem counter-intuitive to use, or advocate for the use of QRP power levels when battling other stations for DX and/or contest contacts. After all, this is a competition, right? Why wouldn't you want to use the maximum power possible to break pile-ups and rack up higher contest scores?

So let's explore the opposite mindset of working toward success with self-imposed power limits. We will try to determine what is considered QRP, as well as explore why any sane person would want to use it. And in the process we might be able to clear up some possible misconceptions.

I have been using QRP for all my DXing, contesting and casual operating for the last 43 years and I'd like to share with you how I was first "afflicted" with the QRP bug. For several years I had read about the experiences of other QRP operators, primarily in the QRP column of Ade Weiss, W0RSP, in CQ Magazine. In March of 1980, I took the plunge. I got rid of my old full-power radio and bought a Ten Tec Argonaut as my only radio delivered an earth-shattering three watts. I was amazed by the DX I worked that first day. I was immediately "hooked" and have never looked back. Since then I've been running exclusively QRP at the five watt (or less) power level from my home station, as well with portable operations.

QRP, as we all know, is the Q signal for "reduced power", as opposed to QRO. But what power level are we talking about? It seems like a simple question, but the reality is a bit more complex. QRO may be assumed to be 400 watts, 800 watts, or 1.5 kilowatts, depending on legal constraints (by country). And we often refer to the typical 100 watt level, common in most "out-of-the-box" transceivers as "barefoot". So then what is QRP? To a certain degree it depends on who you ask and when the question was asked, since the definition has evolved.

QRP DXing & Contesting (cont.)

Arguably QRP is a relative term. Hams have been using low power for decades, sometimes by choice and sometimes because that was the only way an individual could get on the air. The QRP ARCI, a club dedicated to low-power operation back in the 1960's, originally defined QRP as a maximum of 100 watts input – a far stretch from today! In the decades since, it has become customary to measure transmitter power by the amount of RF output which is consistent with how we are regulated now.

Certainly 20 watts may be described as “QRP”, compared to running a kilowatt. But there is value in developing a specific output level that qualifies as true QRP, so the “measuring stick” is uniform and consistent for everyone. The definition of QRP was gradually further whittled down to lower power. But some felt the cutoff should be higher for SSB than CW, reflecting the relative efficiencies of the two modes and the greater challenge associated with low-power SSB. As a result a two-tier metric evolved: ten watts PEP on SSB or five watts for CW.

But now, finally, for more and more QRP enthusiasts, the elusive definition has been further refined to be an output power of five (5) watts or less, regardless of mode. This is currently the most universally accepted criteria and is consistent with the parameters outlined by major contest sponsors. You may also see the term QRPp which is usually associated with one watt or less.

This is certainly not to minimize the efforts of those who use 20 watts or 10 watts. Using those power levels is challenging, however countries worked, or contest scores attained with that RF output would not qualify for the standards of most contests and some awards. The WAC award defines QRP as 5 watts or less. The WAZ award, while endorsable for QRP, does not specify a power level. Many of the other major awards such as DXCC, WAS, etc., are not endorsable for QRP.

So now that we have defined QRP, albeit not without a struggle, the next question is one of personal philosophy. Why would anyone choose to use such low power? Are QRP operators masochistic? Well, it might help, but it is not a requirement! The reality is that, for most of us, it is the challenge.



QRP DXing & Contesting (cont.)

What can we accomplish with five watts or less? And what can we do to optimize our station and operating skills to increase our accomplishments? It is a daunting challenge to effectively chase DX and be competitive in contests with QRP. But the rewards are directly proportional to the challenge. There is nothing more satisfying to break a pile-up and work a DXpedition for a new band-country, or perhaps an all-time new one (ATNO). And nothing puts a smile on a weary QRP operator after a contest more than seeing how well their score compares with others across the country (or perhaps his/her own score from last year).

I do want to address a stigma sometimes attached to QRP operation. A few people tend to take a disparaging view of QRP operation, with the opinion that those stations don't measure up to the quality standards of others, simply because they are running very low power. - Or that the QRP operators' skill levels are less than that of QRO operators. But I believe that using QRP effectively requires an efficient station, with a good antenna system, and the operator must be skilled. In fact, using QRP can hone your skills!

Is it true that QRP DXing and contesting depends on the skill and equipment of the operator and station on the "other end" of the contact? Of course. We QRPers appreciate the "good ears", patience, and persistence of those operators and the quality of their stations in pulling out our "peanut whistle" signals! Big antennas on "the other end" definitely help the QRPer to be heard! But is incumbent upon the QRP operator to optimize his/her skills and station design, including efficient antennas, to be able to make the contact too.

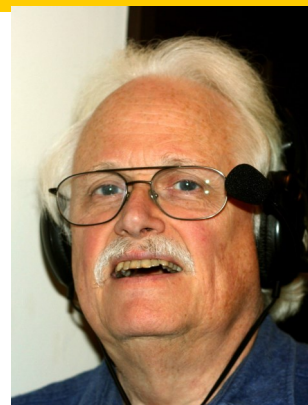
I need to offer a quick comment about antennas, since some people equate QRP operation with poor antennas - think of the proverbial "wet string" or "bed springs". There are even those that feel that QRP operation should only be done with very basic antennas - that somehow using big, high, directional antennas are "not true" to the QRP "creed". But nothing could be further from the truth. If we are only putting out five watts or less, we need to do as much as possible with that flea power! So it is essential to make sure our feed lines are low-loss and our antennas are efficient, high, and in the clear. If we have the ability to have directional, rotatable antennas, even better. QRP output is just that: output from the transmitter. It should not imply effective radiated power (ERP), so there is no limit on antenna gain!

In future columns we'll expand on some of these points and offer some observations, tips and techniques that can increase your enjoyment and chance of success in using QRP to contest and chase DX. And we'll share some "war stories", as is common in our hobby, to demonstrate what can be accomplished (or to assess mistakes that were made). I would also invite you to send me any questions you may have, as well as to share your QRP DXing and contesting experiences.

Planning Antenna Systems for the Little Gun Station

By Jim Brown, K9YC

This article was originally a three part series that appeared in the Northern California Contest Club Journal, Dec 2022 through Feb of 2023. © Jim Brown. It is reprinted here with the permission of Jim Brown and the editor, Fred Jensen, K6DGW.



One of the things I've always enjoyed about ham radio is planning and implementing HF antenna systems, both for my own station and for other hams. Our choices are usually limited by real estate, antenna supports that either exist or can be built, the feasibility of putting antennas on those supports, the cost of various options, and what the neighbors (and the XYL) will tolerate. But that's only part of the equation. The other part is how well various options will meet our objectives. This article is about the second part.

With limited space for antennas and with limited supports, the choice often comes down to an all-band vertical or a horizontal dipole (perhaps in an inverted Vee configuration). And if a vertical, should it be ground-mounted or elevated -- perhaps on the roof of a house or garage?

A few summers back, I was re-reading and eventually studying carefully a report by Ward Silver, N0AX, and Steve Morris, K7LXC, on comparative measurements they had done back in 2000 of eight multiband HF verticals that were representative of what was currently available. Most manufacturers were vague about mounting height, so all were set up at 18 inches over an extensive radial system.

The antennas fell into two distinct groups -- those in the first group were base-fed radiators that approximated an electrical quarter wave, with or without loading coils or traps, while those in the second group were some form of center-fed dipole, again with loading or various matching schemes to achieve multi-band operation. The first group required radials, some of which were integral to the antenna, while those in the second group were advertised as not needing radials.

In his report, Ward speculated that vertical dipoles might have been helped by the radial system, but skirted the issue of mounting height. All of which got me thinking -- what about mounting height? And what about radials for a half-wave antenna? I decided to undertake a serious study of these issues by modeling the two fundamental antenna types in NEC, comparing antennas that were ground-mounted over very good radial systems with the same antenna at mounting heights that the average ham might achieve, and I repeated each model for five different soil conditions representative of the wide range hams around the world are faced with. I presented the result of this work to the Pacificon Antenna Forum in October 2013 with the title, "If Can Put My Multi-band HF Vertical on my Roof, Should I?"

Planning Antenna Systems (cont.)

When evaluating any system, the first question to ask is, "What do I want to achieve?" In the case of an antenna system, the related questions are; 1) where are the stations I want to work? 2) at what vertical angles do signals to/from those stations most often propagate? 3) how much local noise is present at my QTH, where are the sources with respect to where I can put my antennas, their directivity, and what is the polarization of the noise? We'll study #1 and #2 first. For domestic contesting from the west coast, a horizontal antenna broadside to about 75 degrees is one good option, and 2-3 elements with that directivity would be even better. And because most of the stations we need to work are in the range of 2,000 - 2,500 miles, good performance at low angles is important.

A domestic contester on the east coast and Midwest faces a very different set of challenges. Population density suggests the need for antennas that are less directional in both the horizontal and vertical plane. Given these realities, I chose to plot the vertical patterns of these antennas for the same soil conditions on the same graph, so that the relative differences are clearly shown. We can't change our soil (except by moving to a new QTH), but we can change the antennas we use and how we install them.

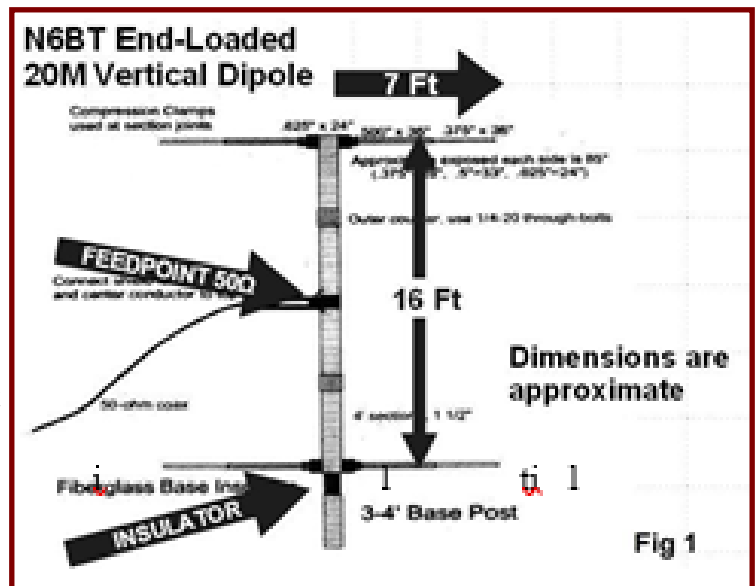
N6BT End-Loaded ½ wave Vertical

The first antenna modeled was an interesting design by N6BT -- it's an end-loaded center-fed dipole for 20M. The antenna is shown in the diagram on the right.

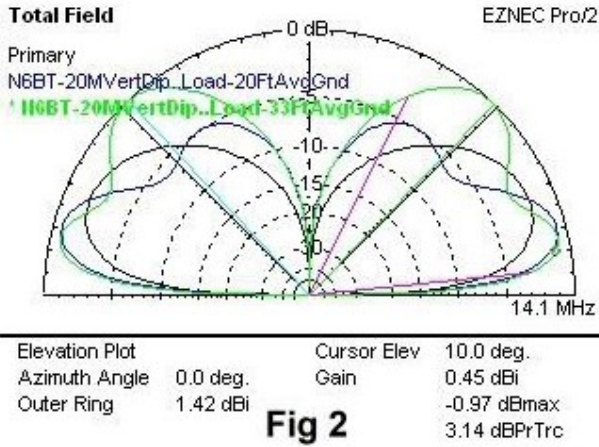
Most multiband antennas based on center-fed dipoles are shorter than a half wave on 20M, so are loaded in some way to make them resonant. This loaded antenna is very approximately representative of how a typical multiband vertical dipole would behave on 20M.

Fig 2 compares the vertical radiation of this antenna with its base at 3 ft over average soil (the black curve), with the same antenna at 20 ft and 33 ft. The cursor is on the 33 ft curve at 10° elevation.

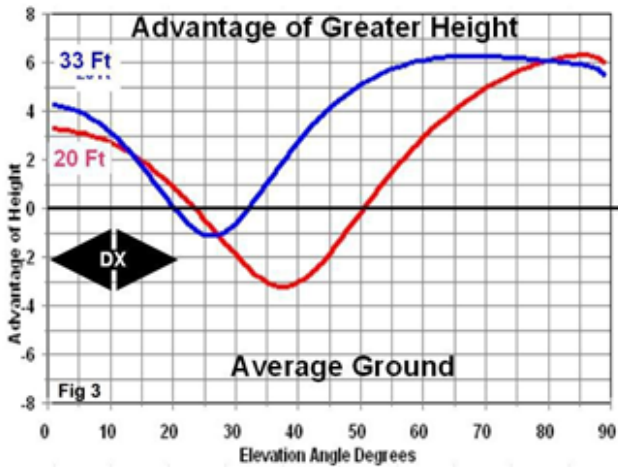
The bottom right readout of "3.14 dB Pr Trc" tells us that the antenna at 33 ft is 3.14dB better at 10° elevation than the same antenna with its base 3 ft above ground. [Keep this read-out in mind as you study all the plots in this article.] (Figs 4-7 show results of the same analysis for the very poor soil conditions typically present in cities, and the very good soil conditions of Midwest US farm land)



Planning Antenna Systems (cont.)

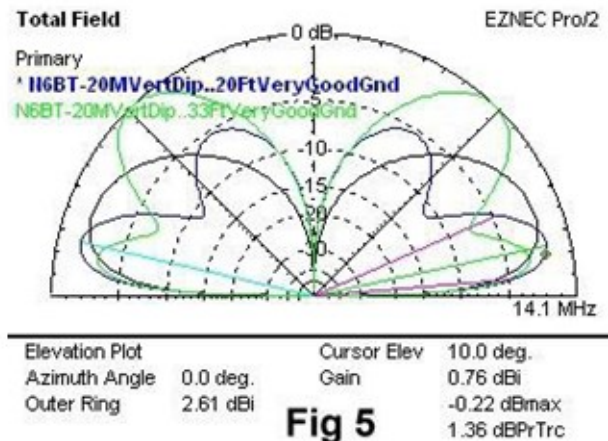
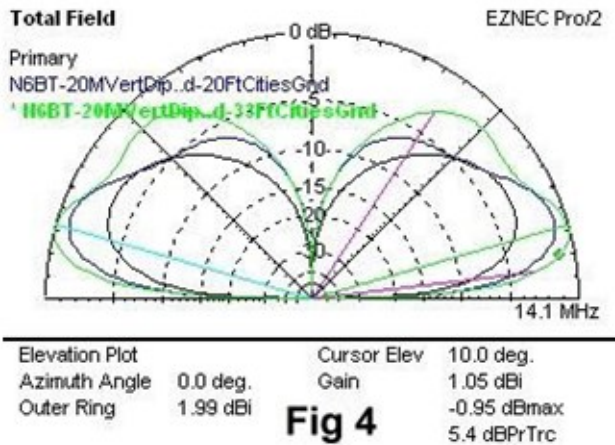


NEC only plots in polar form, which makes it difficult to see the differences between the results at very low angles where the curves appear to be almost on top of each other. I can see these differences in the NEC display by moving the cursor to various vertical angles, but they don't show up well in the plot. Moving the cursor shows the differences to be significant, but to show them here, I must export NEC's results in tabular form for each modeled condition to a spreadsheet and re-plot them in linear form. Fig 3, 6, and 7 plot the difference between the antenna mounted at 20 ft and 33 ft with the antenna at ground level. In other words, they are subtracting the elevated curves from the ground-mounted curve and plotting the difference in dB.

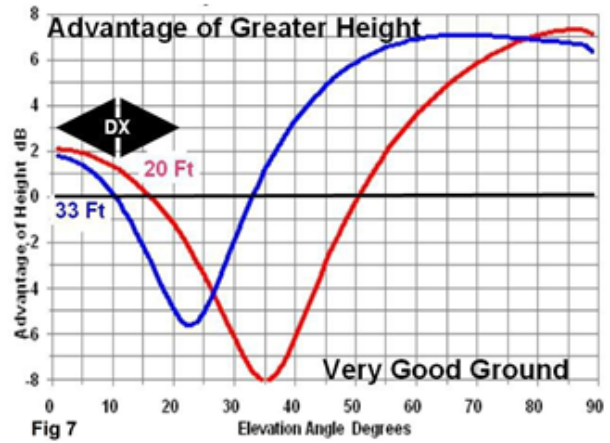
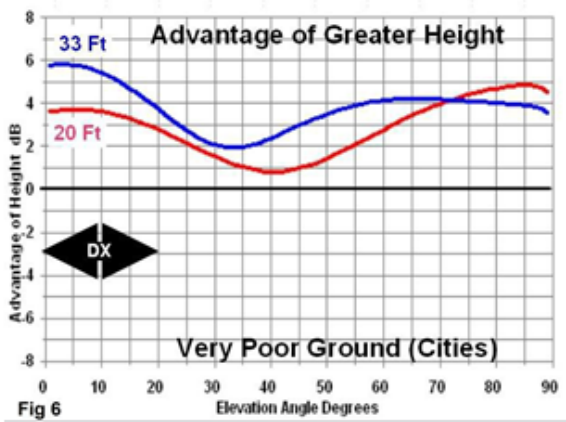


It takes a great deal of additional work to generate these plots, so, although they are useful, I didn't spend the many hours to develop them for the remaining analysis. But do keep these views of the data in mind as we study the conventional polar plots. Virtually all of these modeled conditions follow the trends of this data set -- that is, the advantage of elevating verticals at 10 degrees is maintained all the way down to 1 degree, and in most cases, increases by a dB or so.

Also, throughout most of this analysis, we'll use 10 degrees as a general indicator of the contesting and DX performance of an antenna.

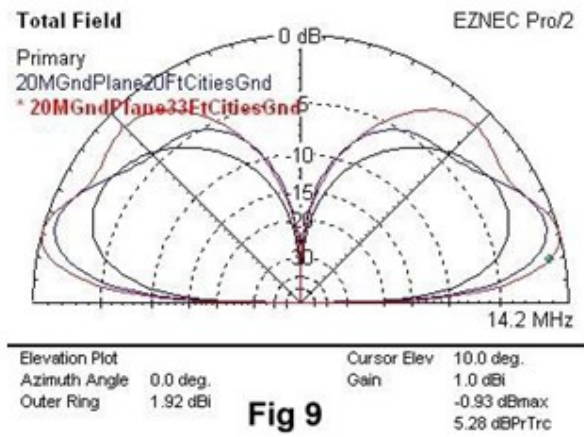
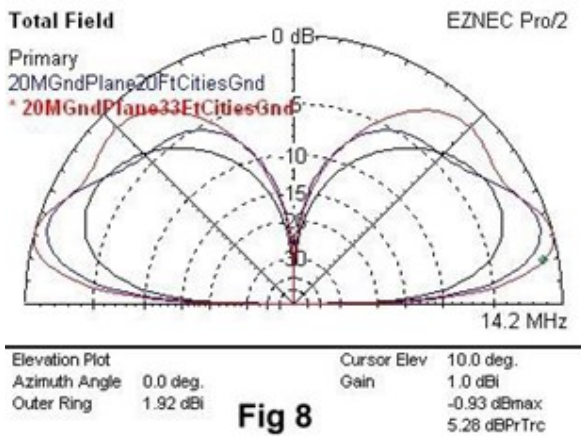


Planning Antenna Systems (cont.)



We learn several interesting things from these plots. First, for all soil conditions, the low angle performance of this loaded 20M vertical dipole is improved by increased mounting height, and the improvement is greatest for the poorest soil conditions. Indeed, for very poor soil, the higher antenna is the better performer at all wave angles! Second, the vertical pattern breaks down into two lobes, one at low angle and one at an intermediate higher angle. Both the strength of the lobes, and the depth of the dip between the lobes, are most pronounced for the best soil conditions. As I learned from further modeling, the same thing happens with virtually all vertical antennas.

Next, we'll look at a simple quarter-wave vertical under similar conditions. On the ground, it's modeled with 32 radials; at 20 and 33 ft, there are four radials. Both the vertical element and the elevated radials are 3/4-in aluminum. Figs 8, 9, and 10 show that this antenna responds as well to being elevated as does the shortened 20M dipole!



Planning Antenna Systems (cont.)

Fig 11 illustrates another important effect of making the vertical radiator longer as a fraction of a wavelength. The rounder, more uniform pattern is the $\lambda/4$ ground plane; the $\lambda/2$ pattern is smooth with no lobes, but is "flattened" so that energy is more concentrated at lower angles; and $5\lambda/8$ vertical has slightly more low angle radiation, but develops both a high and low angle lobes with a mild null between them. As we will learn later, the differences in these patterns are essentially due to their current distribution. Raising the current maxima by a quarter wave increases low angle radiation by a few dB at the expense of a few dB less at higher angles. Adding another $\lambda/8$ improves both high and lower angles. Vertical radiator heights the range of 180 - 210 electrical degrees are quite popular with major AM broadcast stations.

From the above, it's quite reasonable to expect the effects of mounting height to be wavelength dependent, so we'll next study how a 40M ground plane at mounting heights of 33 and 45 ft compares to a ground-mounted vertical with 32 radials. Again, we see almost exactly the same effects as before, differing only by degree -- the benefits are greatest for the poorest ground types, less for very good ground, and greater heights with very good ground produces more pronounced lobes and nulls.

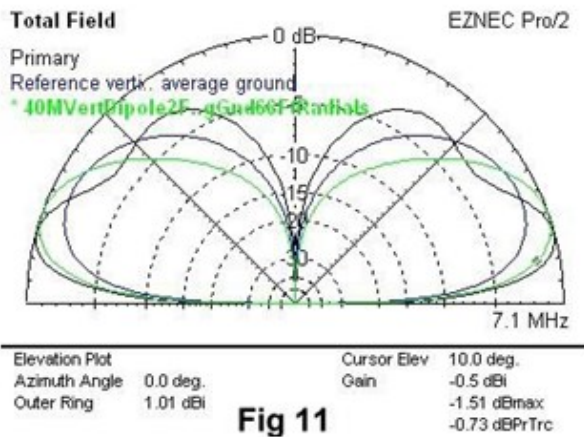


Fig 11



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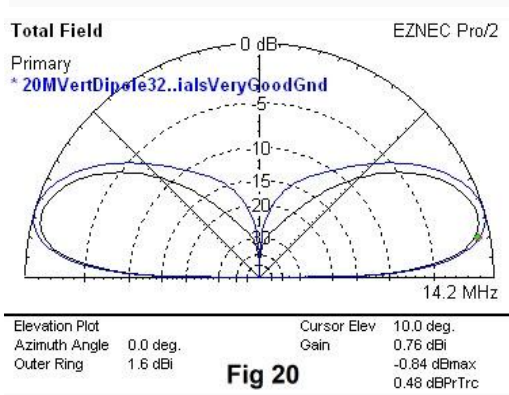
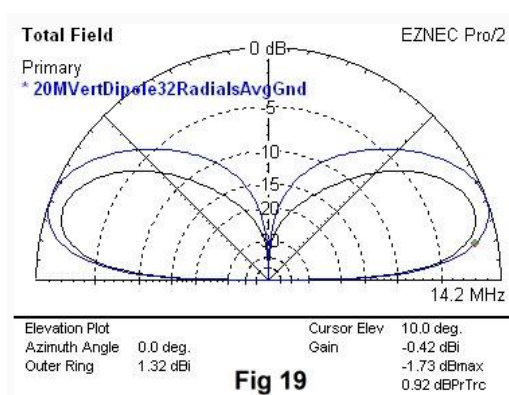
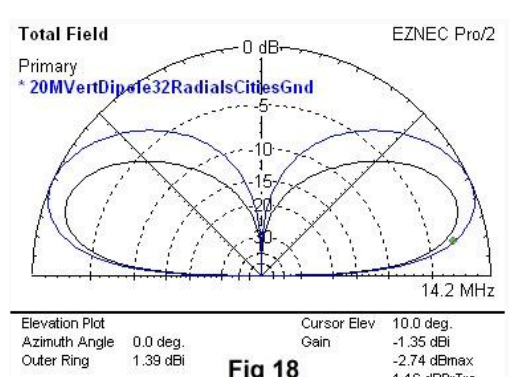
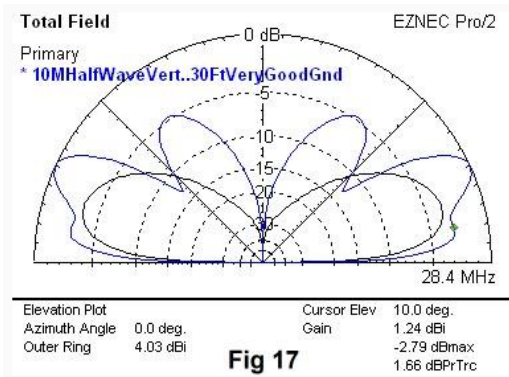
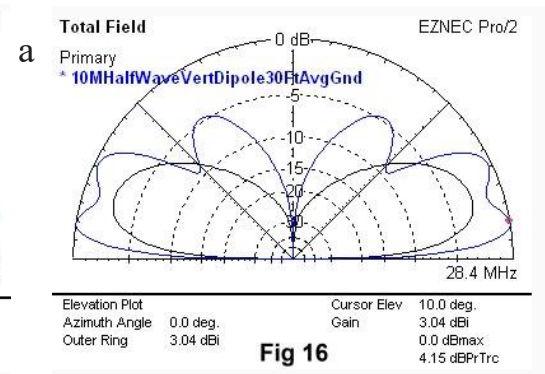
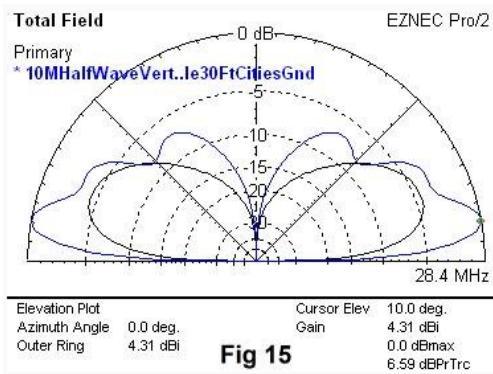
*DXpedition teams depend on DX Engineering's durable,
low-loss coaxial cable. You can too.*

Planning Antenna Systems (cont.)

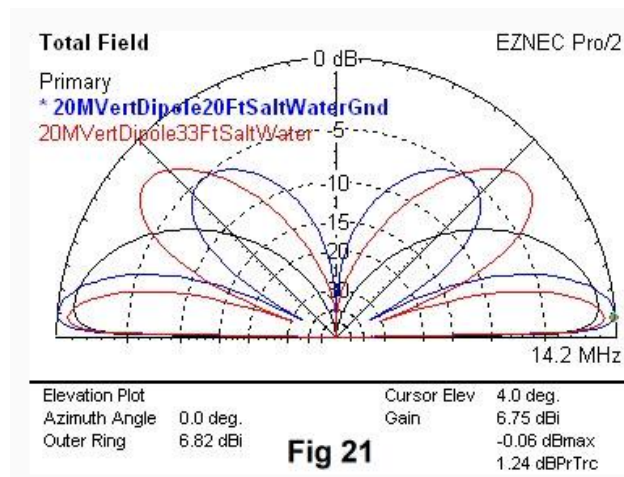
Our next antenna, a 10M vertical $\frac{1}{2} \lambda$ dipole, is modeled with its base 6 inches above ground, and at 33 ft. Results are shown in Figs 15, 16, and 17. Here, elevating the antenna is a major improvement for all ground types, and for almost all vertical angles.

Next, I studied the issue of radials for a half-wave antenna. It's a commonly held belief that half wave antennas do not need radials, but a search of ARRL technical publications will find statements to the contrary (ON4UN book, for example). I modeled a half-wave center fed 20M dipole built with 3/4-in diameter Al tubing, mounted 1 ft above ground, with and without 32 half-wavelength radials. Radials are laid on the ground and are connected only to each other in a star configuration. Results are shown in Figs 18-20. Increased radiation is greatest for the poorest soil and for higher vertical angles.

We're now in position to summarize the results of our study. 1) A vertical antenna mounted above ground in the range of $\frac{1}{4} \lambda$ will generally outperform the same antenna mounted in close proximity to the earth. 2) Improvement will be greatest for the poorest soil conditions. 3) Improvements will be greatest at low radiation angles. 4) At heights above about $\frac{1}{4} \lambda$, lobes and nulls develop in the vertical pattern that are most pronounced with very good soil. 5) In general, there is little benefit to increased mounting height of antennas over sea water.



Planning Antenna Systems (cont.)



The result of Fig 21 is typical -- while low angle radiation increases by a dB or so, lobing at high angles becomes more pronounced with increased mounting height

The next question is, why do vertical antennas work this way? As I see it, there are three primary effects, the first two of which are included in the model. 1) Fields produced by vertical antennas, including their radials, induce currents in the lossy earth. These losses are greatest when the antenna is near the ground, and decrease the overall strength of the radiated signal. As

the antenna is elevated, these losses are reduced, because the EM field, and the resulting current, are being returned to the antenna (the radials or the other half of the dipole) rather than to lossy earth. 2) The EM field radiated by the antenna hits the earth at some distance from the antenna, is reflected by the earth, and the two wavefronts, direct and reflected, add to produce the vertical pattern. At vertical angles where they are most nearly in phase, they add to increase the signal strength, and at vertical angles where they are close to 180 degrees out of phase they produce a null. Lobes are strongest, and nulls are deepest, when the direct and reflected waves are more nearly equal in amplitude at the 0 and 180 degree phase angles. 3) The horizontal and vertical pattern of any antenna is distorted by surrounding conductors -- often called "ground clutter" -- and additional losses may be introduced. This effect is difficult to model, and no attempt was made to do so, but it's safe to assume that it is reduced by elevating the antenna.

Elevating Verticals -- the Practical Side: As noted earlier, multi-band HF verticals tend to fall into two generic types -- base-fed verticals that require radials, and center-fed verticals that do not. When ground-mounted, many radials are required, but length is not critical -- $32\text{-}\frac{1}{4}\lambda$ radials laying on the ground is generally within a dB or so of optimum. Radials serve to "shield" the fields produced by the antenna from the lossy earth, and they carry the antenna's return current. The return current divides approximately equally between the radials, and losses equal to I^2R are induced. The more radials, the lower the loss, because power is current squared. Also, the fewer the number of radials, the less likely the current will be equally distributed, which also increases the loss.

When radials are elevated, fewer radials are needed to equalize the current, and the increased height reduces coupling to the lossy earth. Four $\frac{1}{4}\lambda$ radials are sufficient for verticals at least $\frac{1}{8}\lambda$ above ground, and modeling suggests that two $\frac{1}{4}\lambda$ radials per band are within a dB or so of optimum for multi-band verticals if those radials are distributed radially around the feedpoint. But that's still a lot of radials, so elevating a base-fed multiband vertical is a non-trivial effort.

Planning Antenna Systems (cont.)

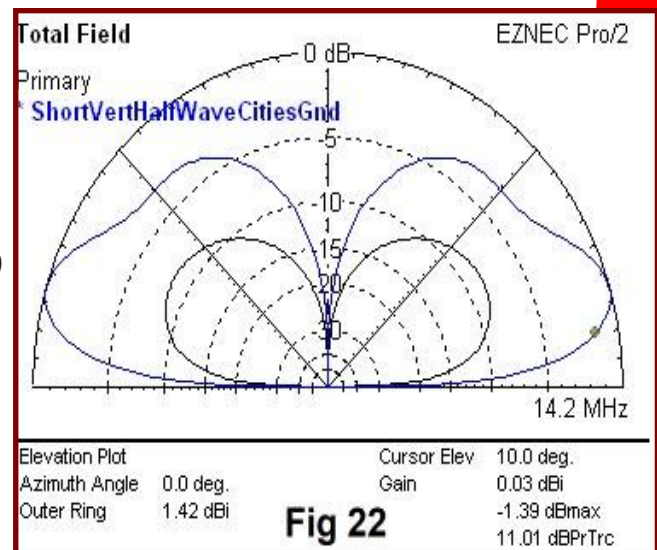
Center-fed verticals are far easier to elevate because they do work without radials, and because elevating them reduces ground losses to the extent that radials have little effect. Some examples of center-fed multi-band verticals are the Gap Titan, Force 12 V3 and ZR3, HyGain AV620, AV640, and AV680, Cushcraft R6, R8, R9.

End-fed verticals can be mounted on towers with little effect on their performance as long as they have radials but do not work well when mounted on towers without radials using the tower as a counterpoise -- the tower becomes part of the antenna and seriously degrades the vertical pattern.

Center-fed dipoles mounted on towers present a special problem. They must be insulated from the tower, but the feedline must come down the tower, and the capacitance between the feedline and the tower couples it to the tower. In addition, good practice for lightning protection of the feedline calls for the feedline to be bonded to the tower at top and bottom, which also couples the antenna to the tower. With this coupling, the antenna is vastly different from its original design, and its performance is likely to be poor.

Losses in Multiband Antennas: My models are for fundamental antenna types, where losses are minimal. The various engineering techniques used to create a multiband antenna often add loss, whether due to the resistance of traps or increased current in matching sections. The radiation efficiency of any antenna is limited by the simple voltage division between the radiation resistance, R_R , (good resistance that accounts for radiated power) and series loss resistance (conductor resistance plus ground resistance). Radiation resistance increases with physical length as a fraction of a wavelength; R_R is about 37Ω for a $\frac{1}{4} \lambda$ antenna, but falls to about 7 ohms for a $\frac{1}{8} \lambda$ radiator. We must keep these factors in mind when comparing one antenna to another, and these efficiency differences are essentially what the N0AX/K7LXC tests were measuring.

And there's yet another factor at play -- when an antenna is physically short, e.g. a fraction of a wavelength, the current must be increased (by means of a matching network) to maintain the same radiated power, and the increased current increases losses. This means that short antennas can benefit even more from being mounted higher because the coupling of the increased current to lossy earth is reduced. Figs 22 and 23 show the extreme case -- a 4 ft tall center-fed dipole on 20M at heights of six inches and at 30 ft. Most multiband antennas will be subject to this factor -- that is, they may benefit a bit more from being elevated than suggested by my models of near-ideal antennas.



Planning Antenna Systems (cont.)

Reduced Losses and Impedance Matching: It's well known that many antenna designs "use" the ground loss component of the feedpoint impedance to bring that impedance closer to 50 ohms, so when losses are reduced by elevating the feedpoint, the SWR may rise a bit. Not to worry -- the small additional loss in the line due to mismatch is much less than the efficiency gained from elevating the antenna. Smart hams also know that the most important reason to use big coax is to reduce loss. This is especially important when running low power or with a compromised antenna system. Indeed, the only good reason for using small coax is to minimize visibility from neighbors (or an XYL) with an attitude!

Comparing Verticals with Horizontal Dipoles: Now that we know a bit more about what can be done by elevating a vertical, the obvious question is, how do these verticals compare with a conventional horizontal half-wave dipole? We'll begin by studying the effect of ground quality on a horizontal dipole for 40M. Fig 24 shows that at low vertical angles the difference is negligible -- only 0.6 dB difference between the best and worst soil types, and an improvement of about 2 dB for the best soil at NVIS.

Height of Horizontal Antennas: The most important characteristic of a horizontal antenna is its height above ground. Fig 25 compares the vertical pattern of a 40M dipole at heights of 33 ft, 43 ft, 53 ft, 63 ft, and 73 ft. As the antenna is raised, high angle radiation is suppressed and low angle radiation is enhanced. For most contesting, a higher dipole is a much better performer! Fig 25 can be scaled by wavelength -- that is, to predict behavior of a 20M dipole, divide heights by 2, for 80M, multiply by 2.

Now we're ready to compare verticals and dipoles at mounting heights that are practical for many hams, even on small lots. Figs 26-28 compare a horizontal 40M dipole at 33 ft with a simple 40M ground plane at 6 inches and at 33 ft. For all three soil types, the vertical at 33 ft outperforms the horizontal dipole at low angles, at the sacrifice of

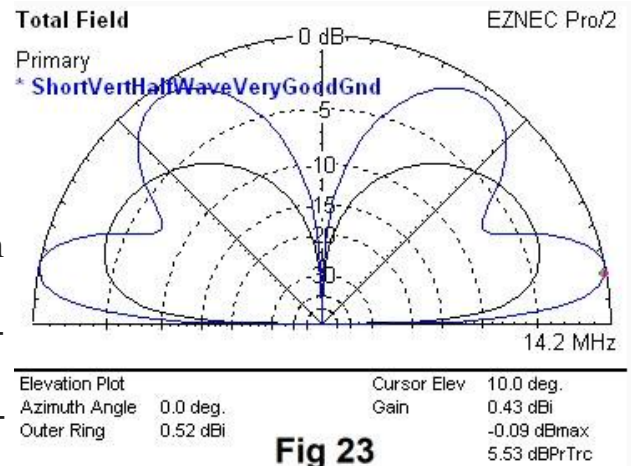


Fig 23

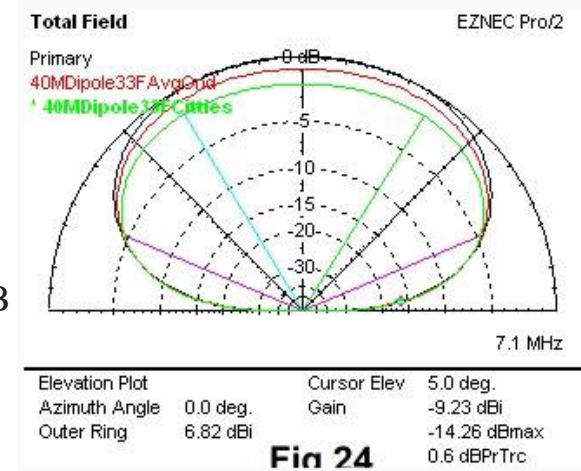


Fig 24

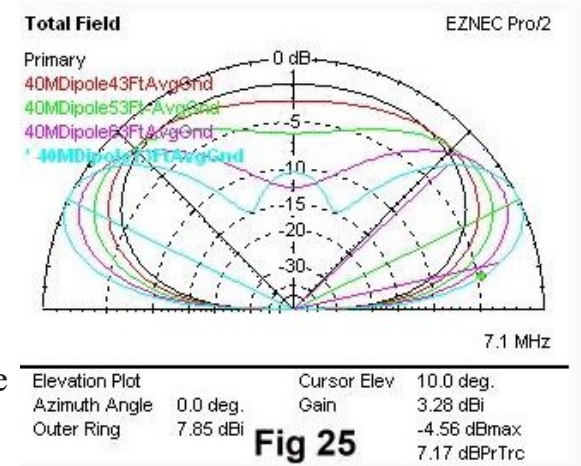


Fig 25

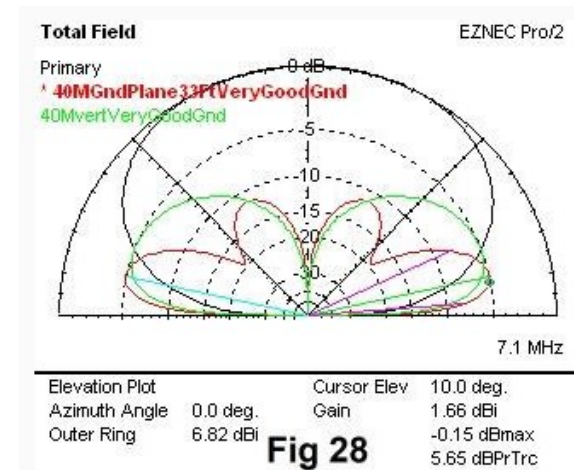
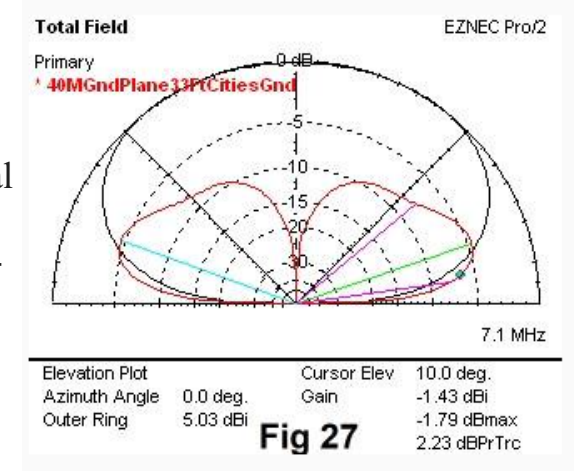
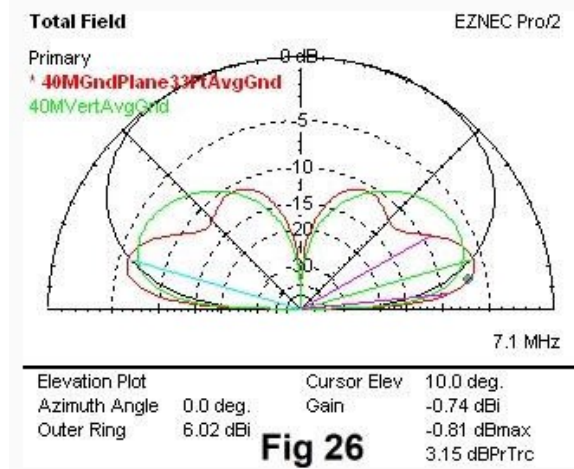
Planning Antenna Systems (cont.)

high angle radiation, **in the main lobe of the dipole!** Off the ends of the dipole the advantage of the vertical at low angles is even greater depending on soil type. Again, this is broadside to the horizontal dipole -- off axis of that, the vertical has a greater advantage. Note also that the high angle radiation of the vertical dipole doesn't fall off as much as for the 40M antenna. Again, remember that these models are for near ideal antennas -- the efficiency of practical multiband antennas reduces their performance by a dB or two.

What About a Small Beam? To estimate its performance, add 4 dB to the advantage of a horizontal antenna for a small beam without traps at the same height (only 2-3 dB if there are traps). And remember that its directivity can reduce noise and QRM, so it may help us hear the weak ones. For a simple 2-element vertical array, add 3 dB over the performance of a single vertical.

Getting Practical -- Where Can I Put Antennas?

Now that we have a good idea about how various antennas perform, we're back to where we began. We can start looking at the possibilities that our real estate (and the attitudes of XYL and neighbors) permit. What do we have for skyhooks? Can we launch a rope into a tree to support one end of a dipole? Will a building support one end of an antenna? Can we safely mount a multiband vertical on the roof of our home or garage? Can we route a feedline from the proposed location to the shack? How close would the proposed antenna be to noise sources? To our neighbor's living room entertainment system? What are the best orientations for horizontal dipoles based on where the QSOs are? Do I need much high angle radiation?



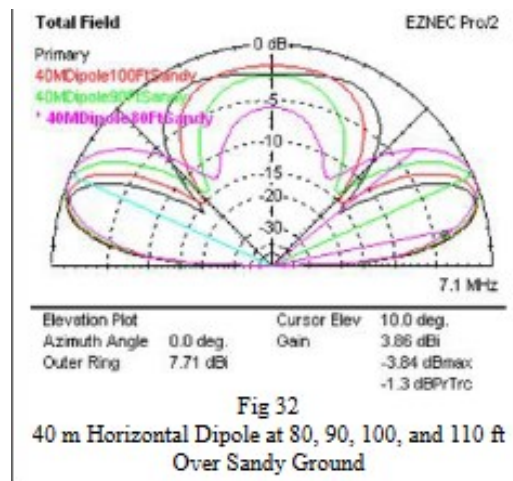
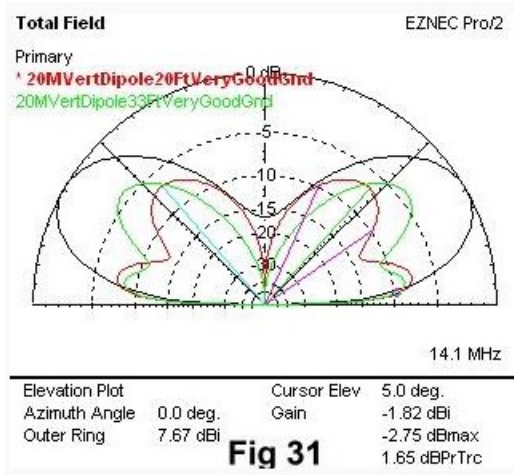
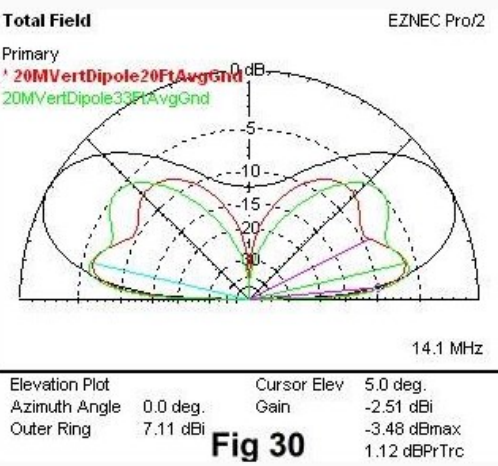
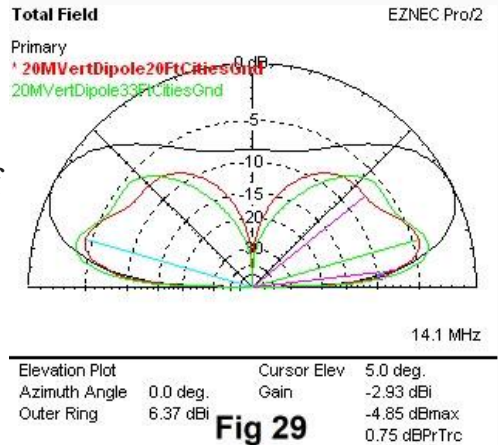
Planning Antenna Systems (cont.)

Experimental Confirmation of Modeling: Signal strength measurements were made with the dipole center at ground level and the feedline laying on the ground to form a quarter-wave vertical with a single radial; then with the choke 6-inches above ground level, forming a half-wave dipole with its base 6-inches ground level; then with the dipole raised in 10 ft increments to a maximum height of 40 ft above ground. My RX antenna was a 20M vertical with two radials laying on the ground.

Figure of Merit for Height of Horizontal Dipoles

A careful study of Fig 25 suggests that another view of the data might be worthwhile. Fig 32 expands the data set of Fig 25 to 110 ft. Fig 33 provides another very useful view of the same data. I took data points from each antenna height curve for vertical elevations of 5°, 10°, 15°, and 20°, entered them in a Quattro Pro spreadsheet, and plotted it to produce Fig 33. The slopes of these curves, which are essentially parallel to each other below about 80 ft, allows us to define a “figure of merit” for the height of a horizontal 40M antenna for low radiation angles.

What is Height Worth On 40M? Fig 33 clearly shows that, for all angles below about 25 degrees, 10 ft of added height is worth about 1.9 dB on 40M between 20 ft and 70 ft. The advantage of additional height is much less above 70 ft ($\lambda/2$). Raising a 40M dipole from 33 ft ($\lambda/4$) to 67 ft ($\lambda/2$) is worth about 6 dB at vertical angles below about 20 degrees; going up to 120 ft ($.433\lambda$) is good for another 3 dB for radiation angles below about 15 degrees.



Planning Antenna Systems (cont.)

What is Height Worth on 80M? Figs 34-36 show the corresponding results for 80M. Below a height of about 133 ft ($\lambda/2$), every 10 ft of mounting height increases signal strength by about 0.9 dB at elevation angles below at least 30°. A dipole at 133 ft ($\lambda/2$) is nearly 6 dB louder at low angles than one at 67 ft ($\lambda/4$), and the 67 ft high dipole is 3 dB louder than it would be at 33 ft ($\lambda/8$).

Debunking The NVIS Myth Fig 36 clearly shows that you don't need a ground-hugging dipole for NVIS (high-angle paths to work nearby stations). Indeed, the optimum height for NVIS is 0.22λ (60 ft on 80M), and an antenna at 0.33λ (90 ft on 80), is only 1 dB less than optimum. And, as we've already learned, the higher antenna is 2.5 dB louder at the lower angles needed to work distant stations. Even when the antenna is raised to 120 ft, high angle radiation is only 3 dB below maximum, while the 120 ft antenna is 3 dB louder at low angles than the 90 ft antenna! On 40M, 30 ft is near optimum for NVIS, 45 ft is only 1 dB down, and 60 ft is only 3 dB below optimum. Table 1 summarizes the result by band:

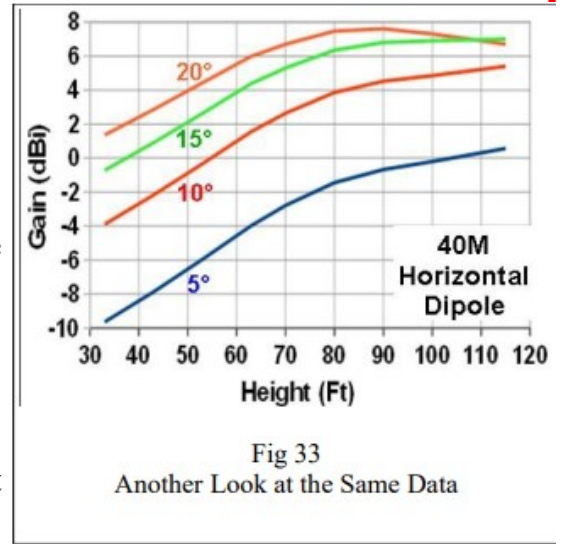
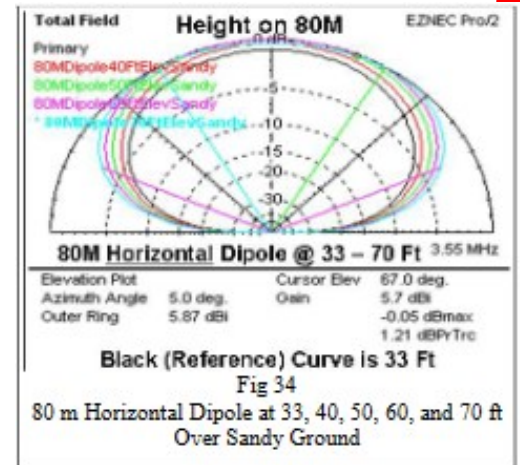
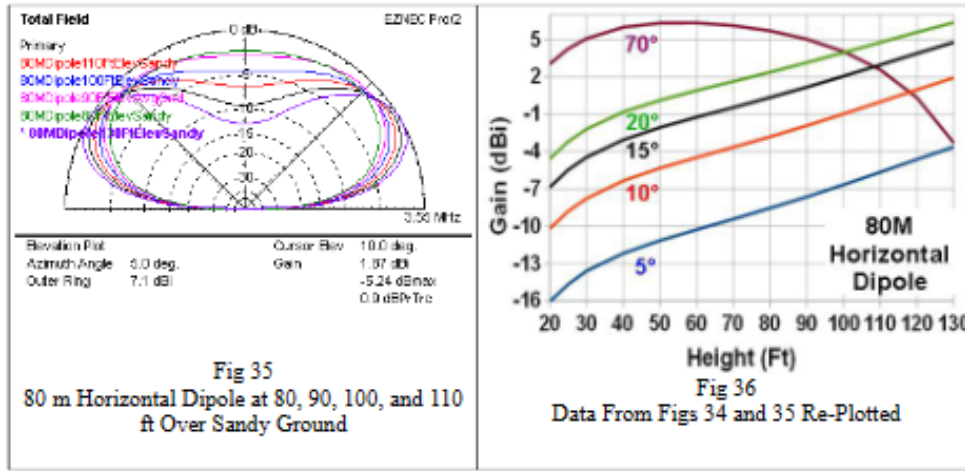


Fig 33
Another Look at the Same Data

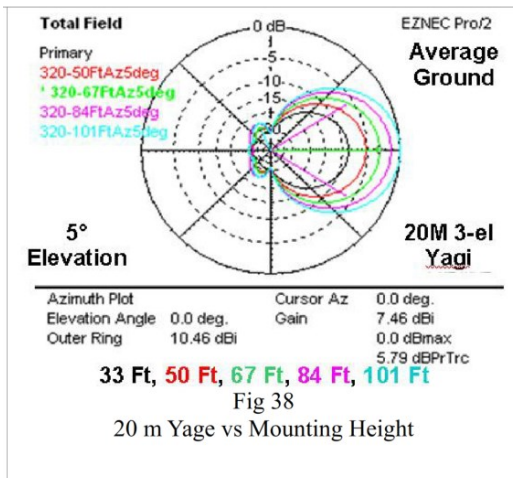
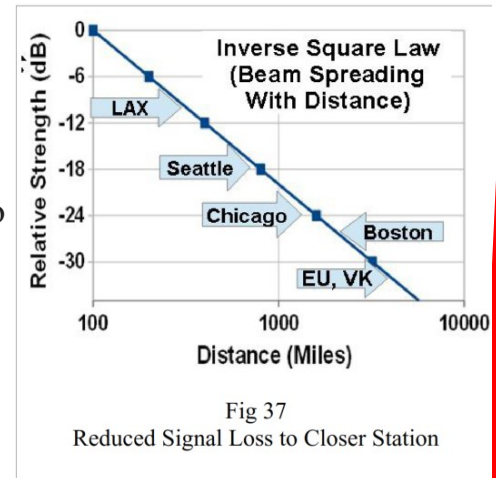
Band (m)	Max (ft)	-1 dB (ft)	-3 dB (ft)
160	120	180	240
80	60	90	120
40	30	45	60



Planning Antenna Systems (cont.)

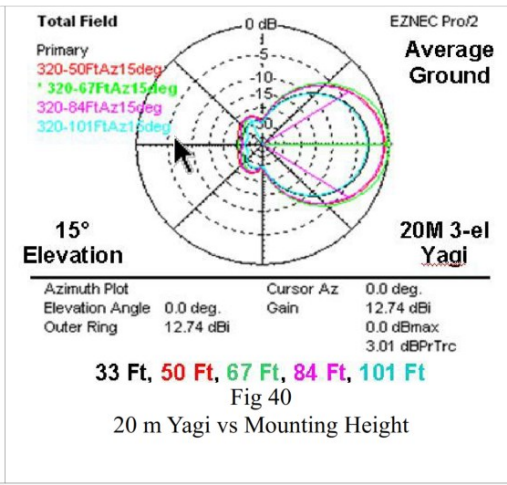
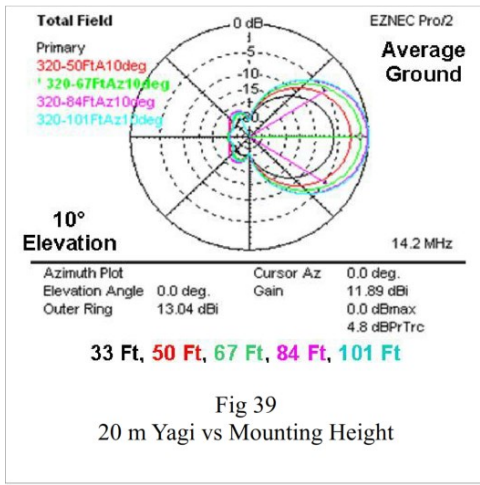


Inverse Square Law Fig 37 shows relative path loss vs distance. Stations we're likely to work by NVIS are in the range of a few hundred miles or less; Fig 37 shows that stations around LAX are 8 dB closer than those in Seattle or Phoenix, and 14 dB closer than those around Chicago. For contesting and DX chasing, we want maximum gain to those distant locations, because inverse square law helps us work the closer ones; the design choices I'll make with horizontal antennas for 40M and 80M will be to get them as high as possible, compromising NVIS performance for maximum DX performance.

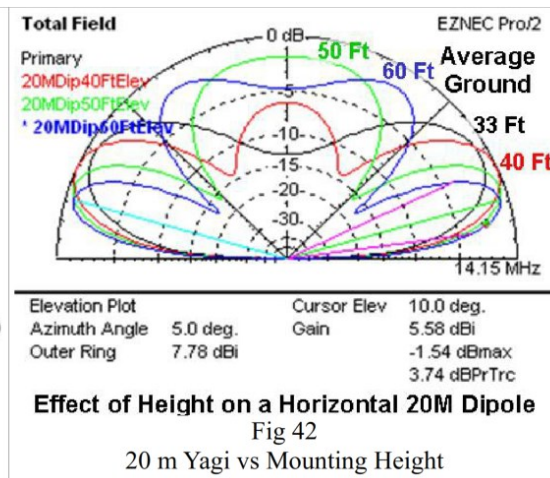
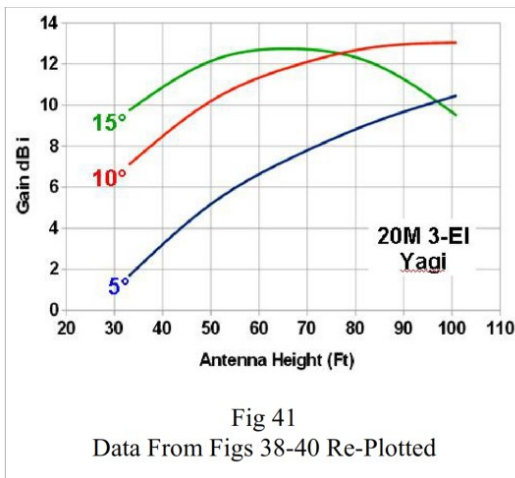


Height Of Horizontal 20M Antennas Figs 38-41 show the effect of mounting height on a typical 3-el 20M Yagi. This particular design is taken from the ARRL Antenna Book.

Planning Antenna Systems (cont.)



The Value of Height on 20M Fig 41 shows that for a 20M Yagi at low angles, every 5 ft of mounting height below about 70 ft is good for about 0.9 dB; we get 6 dB by going from 33 ft to 67 ft. At 5 degrees, we get 2 dB by going from 67 ft to 100 ft. Another way of looking at it is that the three sections of Rohn 25 that it takes to go from 30 ft to 60 ft is worth 5.5 dB.



Lobing of High Horizontal Antennas Fig 42 shows how the vertical pattern of a 20M dipole varies with mounting height. Lobing begins as the antenna is raised above about $\lambda/2$ (33 ft on 20M). Lobes appear first at higher vertical angles; nulls move down as the antenna is raised, and a second null develops at a higher angle. Thus, as we raise the antenna we can optimize it for low angles, but degrade performance at higher angles. Propagation to any given station varies with time; at one time, the path may be at a high vertical angle; an hour later it may be at a low angle. Note that while this data is plotted for a dipole, any horizontally polarized antenna will exhibit the same effects.

Planning Antenna Systems (cont.)

How Does This Relate To Terrain Effects? (HFTA) All of the analysis shown in this report is on the basis of extensive modeling done in NEC, which assumes antennas are in “flatland” – that is, terrain has no effect on propagation. For some of us, this represents the real world, but for many of us it does not. Corresponding models for non-flat terrain should be done using HFTA, simply by setting antennas at various heights and studying the result. In general, the principles outlined here will simply be “superimposed” on the effects of terrain as predicted by the NEC model. That is, increasing the height of a horizontal antenna will tend to concentrate its radiation at a lower angle, which will then interact with the terrain as HFTA predicts.

N6BV’s very useful High Frequency Terrain Analysis (HFTA) software is on the CD that comes with the ARRL Antenna Book. HFTA uses terrain data obtained from government sites on the internet, processes it to generate radial data for every five degrees of azimuth, then computes the effect of that terrain for an antenna at specified mounting heights. HFTA comes with statistical data for each HF band for the vertical arrival angles from one part of the world to another, the user then calls up that data and HFTA superimposes it on the modeled data. My QTH is at 2,000 ft; with nearby ridges in the range of 2,550 ft to the NE and about 2,200 ft to the east and NW.

Extensive HFTA modeling showed that a tower height in the range of 120 ft was near ideal for the HF bands – to improve on it, I’d need to raise the Yagi to about 300 ft. I stopped at 120 ft.

A Practical Design Question: Joe Ham is considering a 2-el Yagi for 40M, which he can put on a 70 ft tower. As an alternative, Joe can hang a pair of horizontal dipoles at right angles to each other in tall redwoods at 120 ft. Which of these two antenna systems would perform best, and by how much?

Performance Difference: From Fig 33, a horizontal antenna would be 2 dB louder at 120 ft at low angles than at 70 ft. If the gain of the 40 Yagi Joe is considering is 3.5 dBd, and we mount it at 70 ft, it will be 1.5 dB louder than the dipoles at 120 ft.

Cost Difference: If you have the trees, two dipoles at 120 ft will cost about \$1,400 for climbers, \$600 for antennas (wire, hardware, coax, rope, pulleys), total \$2,000. An Optibeam Moxon on a 70 ft tower (antenna, hardware, coax, rotator, labor) will cost \$5,000 - \$7,500, depending on whether you do your own climbing and whether you can buy hardware used. Bottom line – the 1.5 dB advantage of that Yagi on transmit costs \$2,500 – \$5,000 more than the dipoles. And, of course, the Yagi may hear better by virtue of its directivity. The reader is encouraged to do his own cost estimates for practical installations.

Planning Antenna Systems (cont.)

Summarizing What We Have Learned

Ground Quality refers to the nature of the earth around your QTH. It has nothing to do with an electrical connection to the soil. Rocky, sandy soils are very poor grounds; moist, loamy soils are good grounds. If you live in the mountains or in highly developed area like a city, your ground is poor to very poor. If you live in a fertile valley, your ground is pretty good. The ground under our antennas burns transmitter power before it can be radiated; good radial systems minimize that loss. The ground at a distance from our antennas (hundreds of yards) reflects the energy radiated by our antennas, which combines with direct radiation from the antenna to form the vertical pattern.

- ◆ Horizontal antennas are not affected by ground quality, because the strength of the first reflection does not depend upon ground quality.
- ◆ Vertical antennas are strongly dependent upon ground quality – the better the quality of the ground, the better they will work because that first reflection is stronger.
- ◆ Horizontal antennas are strongly affected by height – higher is better.
- ◆ Vertical antennas work better if elevated above ground. Roof level of a one-story or two-story home is a good mounting height for HF verticals.

Vertical Antennas on Towers interact with the tower to distort the vertical pattern of the antenna unless they are effectively isolated from the tower. If not very well isolated, the resulting vertical pattern can be pretty nasty. Isolation is provided by radials and by common mode chokes. See Appendix One of k9yc.com/RFI-Ham.pdf.

End-fed verticals (verticals that require radials) can work well on towers ONLY if they have effective radial systems for each band on which they will operate. Two resonant radials per band is a minimum. If it's a mono-band antenna, you'll need four. The feedline also requires an effective common mode choke at the feedpoint. The Butternut, Hustler BTV-series, and HyGain AVQ-series are examples.

Verticals that are, in essence, center-fed dipoles must be insulated from a tower, and the feedline must have a common mode choke that is physically located at the point where the antenna is mounted to the tower. The Cushcraft R-series and MA6-series, the HyGain AV-series, Gap Titan, and Force 12 verticals are examples.

Vertical Antenna Interactions All antennas interact with surrounding conductors to some extent, but vertical antennas tend to have strong interactions with other vertical conductors that can strongly affect their polar pattern.

Planning Antenna Systems (cont.)

Ground and Antennas A connection to earth does not make an antenna work better – the earth is a big resistor, so any current flowing into the ground burns transmitter power. We use radials on vertical antennas to shield the earth from the antenna, so that current and fields from antenna return to the low resistance radials rather than the high resistance earth.

Earth Connections are important – we need them for lightning protection. But they do not make antennas work better, and they do not reduce noise or RFI. What does reduce noise and RFI is to bond together all of the equipment in our shacks, and the earth connections in our homes. Bonding is also critical for lightning safety.

Bonding simply means a mechanically robust, low impedance connection between grounded objects. The impedance must be low at all frequencies, not just DC. Inductance dominates the impedance above power frequencies, so bonding conductors must be very short to be effective.

Getting Practical -- Where Can I Put Antennas?

Now that we have a good idea about how various antennas perform, we're back to where we began. We can start looking at the possibilities that our real estate (and the attitudes of XYL and neighbors) permit. Can I sweeten up my XYL so that she'll accept the antenna I really want? Perhaps she'd like a new sewing machine? What do we have for skyhooks? Can we launch a rope into a tree to support one end of a dipole? Will a building support one end of an antenna? Can we safely mount a multiband vertical on the roof of our home or garage? Can we route a feedline from the proposed location to the shack? How close would the proposed antenna be to noise sources? To our neighbor's living room entertainment system? What are the best orientations for horizontal dipoles based on where the QSOs are? Do I need much high angle radiation?

References:

- "HF Vertical Performance- Test Methods and Results." H. Ward Silver (N0AX) and Steve Morris, K7LXC, Champion Radio Products, 2000
- "Collected tutorials" by Rudy Severns, N6LF. <http://www.antennasbyn6lf.com/> ARRL Antenna Book
- "Low Band DXing" by ON4UN. (for 160M, 80M, and 40M), published by ARRL

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Visalia – the Ultimate DX and Contest Convention!

By Scott Wright, K0MD



Visalia has been long touted as the “Ultimate convention for DXers and Contesters”. I have to agree – I last attended in 2019 and it lived up to that billing then and again in 2023.

It had been four long years since the last Visalia meeting in person. What is there not to like about leaving the late winter season of Minnesota in April and traveling to Visalia, especially with ham friends. K4IU and I decided to travel together to the 2023 conference, and we secured our plane tickets in November of 2022 after realizing how much the prices were going up on the US Airlines. We flew Minneapolis to Fresno, via Salt Lake City. I will travel through Salt Lake City anytime I need to, as it is one of the most beautiful and picturesque settings among US Airports and is likely one of the friendliest airports in America!

Fred, his wife Judy (K0UH) and I traveled to Visalia together last in 2019. It was a tough journey. The day of travel, a blizzard hit MSP. We were one of the last flights out but delayed just enough that we had to spend the night in Salt Lake City. This year, it was completely different. Fred and I traveled as Judy decided she would rather stay in Rochester. The weather was perfect, and we had no travel delays. We landed in Fresno in the late afternoon and traveled by rental car to Visalia, about one hour. Fred was the apt navigator and I the driver. California traffic had a few surprises for us, but we persevered and got lucky to miss an accident or two.

The Marriott Convention Hotel is the home of the Visalia conference – *the International DX and Contest Convention*. Several of our friends were on the program committee, N6PSE, AA7A, KC7V, K6MM, KY7M, Wo0Z and several others that I won't mention just to avoid omitting someone so we knew it was going to be an outstanding three days of ham radio. The keynote banquet speakers were the Bouvet group on Saturday night and our very own W0GJ on Sunday morning. Neither disappointed the audience but bravo to Glenn for his brevity and organization!

Friday at Visalia is largely limited to talks about Dxing and Contesting. Separate sessions on DX University and Contest Academy are run with the DX University Friday morning and Contest Academy in the afternoon. Friday morning had a parallel track called DX and Technical Presentations. This session was particularly interesting to me. I spoke mid morning on my “New 80 m 4 SQR, about the decisions to upgrade to it, the planning, installation and performance of it. I estimated 100-150 hams attended it.

The session before mine was even more interesting and entertaining. Scott, N6MI (A California Attorney and entertainer) and Paul, W6PNG/M0SNA (Good friends with Matt, K0BBC) spoke about the W6E Expeditions: California QSO Party Adventures in the Desert and Mountains. Scott in particular held all of us spellbound with his practiced and well honed oratorical skills. He actually purchased a used TV uplink van, outfitted with a 40 ft telescopic hydraulic mast. He mounted a 3 element tribander on it once parked and used it to run the California QSP. Wow! Imagine the signals he could hear as a mobile station. Paul worked with him using a different set up, a Hexbeam, not quite as tall but as successful from the vantage point of fun and pleasure. They spoke of the difficulties of working together during the COVID pandemic and the ease that the post-pandemic times brought. Paul later told me that Matt, K0BBC will be joining them in October for the CQP. Good luck Matt!

The afternoon Contest sessions had a number of very interesting talks. We enjoyed hearing about the new LUSO tower at K9CT as well as his new beverage system that is replacing the Hi-Z 8 Circle array. One of us (K0MD or K4IU) has ordered the parts to build a similar beverage system. We will leave you guessing until the December ARRL 160 contest. There were 150 or so in attendance for any of the sessions that day.

Friday, April 21, 2023		
Time		Description
11:00 - 17:00	Lobby	Registration
10:00 - 17:00	Lobby	Raffle Ticket Sales
08:00 - 12:00		DX University <i>Sponsored by DXU</i> Location: San Joaquin A-B
		DX & Technical Presentations Track A - Morning Session Location: Charter Oak A-B-E
		Tools For DX Dave, WD5COV
		A Very Low Cost Vector Network Analyzer John, K6YP
		How to Break the Pileup Bill, K8TE
	The W6E Expeditions: California QSO Party Adventures in the Desert and Mountains Scott, N6MI & Paul, W6PNG/M0SNA	
	DXing With FT8 Rob, N7QT	
	My New 80M Four-Square Antenna Scott, K0MD	
	DXing & Best Practices, Q&A Door Prize Drawing	
	So, You Want To Go On A DXpedition? Tom, ND2T	
12:00 - 13:00		Lunch
13:00 - 17:00		Contest Academy <i>Sponsored by NCCC</i> Location: San Joaquin A-B
		DX & Technical Presentations Track A - Afternoon Session Location: Charter Oak A-B-E
		Introduction and Welcome Chris, N6WM
		JTAlert: Audio & Visual alerts for WSJTX & JTDX Configuration & Use Cases Rob, AG6RK
		Contesting Live Hank, W6SX and Kurt, W6PH
		Some Ham Radio and DX History Ron, KF7ZN
		Advantages of Waterfall Displays for Contesting Bob, N6TV
	Get Some and Get More Tom, N6BT, Next Generation Antennas	
	In Band Multiplier Systems Bill, W9KKN	
	T88WA DXpedition To Palau Rob, N7QT	
	ARRL CAC Activities and K9CT Station Additions Craig, K9CT	
	Effect of Mounting Height and Ground Quality On HF Antenna Performance Jim, K9YC	
	Panel Discussion, Q&A	
13:00 - 17:00	Exhibit Hall	Exhibits and Displays Open
13:00 - 17:00	Exhibit Hall	N6V Special Event Station Open
17:00 - 18:30	Eucalyptus Courtyard	DX Bar: Attitude Adjustment Hour Sponsored by DX Engineering

We had dinner on Thursday night with some of the Bouvet team members along with Glenn/Vivien (w0GJ, KL7YL), Dave Anderson (K4SV, Chair W4DXCC) and Greg Lambert K1IT, Dan and Debbie White (W5DNT), Tom Schiller (N6BT, Founder of Force 12, former TCDXA member) and his XYL Vicky Zumwalt, N6KLS. Tom has been instrumental in my antenna array and is a great friend. Vicky is as well so it was nice to have them join us for dinner. Adrian and Mike from Bouvet joined us and then honored Glenn with a special certificate for his contributions to the Bouvet effort. It was an enjoyable time. The stories about the Bouvet experience would frighten you as we learned about some of the untold perils and situations. Bouvet is not for the faint of heart or anyone who is not an extreme risk taker. We will let them tell you the full story as they can.

Friday night, Fred and I joined the November 6 Hotel California dinner organized by Gene Sperling, K5GS. Gene had a reservation at the nicest restaurant in Visalia; we enjoyed the company of several friends, and for me it was a treat to have two old Ky friends on either side, KE4KY Glenn Petri on my left and K4IU Fred on my right. Fred had a lovely conversation with another DXer on his right. We learned about the upcoming Clipperton DXPedition that night; we are excited for them.



K4IU, N6BT and XYL Vicky.

Saturday, April 22, 2023		
Time	Location	Description
08:00 - 11:30	Lobby	Registration
08:00 - 08:15	Charter Oak	Welcome & Overview ARRL Introductions Introduction of DX Visitors
08:15 - 09:15	Charter Oak	New Product Showcase
08:00 - 17:00	Lobby	Raffle Ticket Sales
08:00 - 17:00	Exhibit Hall	Exhibits and Displays Open
09:00 - 17:00	Exhibit Hall	N6V Special Event Station Open
09:30 - 10:25	Charter Oak	DX Forum , Paul, N6PSE (Chair)
09:00 - 15:00	Saturday Bus Tour of Local Area	
10:00	Hourly Prize Drawing #1	
10:30 - 11:25	Charter Oak	Contest Forum , Bob, N6TV (Chair)
11:30 - 13:00	Plaza Courtyard	Saturday Buffet Lunch
12:00	Hourly Prize Drawing #2	
13:00 - 16:00	San Joaquin D	DXCC & WAZ QSL Card Checking
DX & Technical Presentations		
	Track B Location: San Joaquin A-B	Track C Location: Charter Oak A-B-C
13:00 - 13:40	YL Forum Gayle, K6GO (Chair)	Solar Cycle 25 and Related Issues Carl, K9LA
13:45 - 14:25	Remote HF After The Pandemic Mark, K6UFO	Networking Basics For Amateur Radio Al, K7AR
14:30 - 15:10	60 Years of Ham Radio - Working Them All Jim, K6ZH	DXing Using Remotes Ned, AA7A
15:15 - 15:55	Grounding and Bonding Tim, K3LR, DX Engineering	TX5N, Austral Islands DXpedition Gene, K5GS
16:00 - 16:40	ARRL Forum Kristen, K6WX (Chair)	Ham Radio: The Lighter Side John, K6MM
14:00	Hourly Prize Drawing #3	
16:00	Hourly Prize Drawing #4	
17:00 - 18:30	Eucalyptus Courtyard	DX Bar: Attitude Adjustment Hour Sponsored by Individual Sponsors
19:00 - 21:30	Exhibit Hall	DX Convention Awards Banquet
19:00 - 21:30	Emcee: <i>Kristen McIntyre, (K6WX)</i> Keynote: "3YØJ Bouvet DXpedition" - <i>Adrian, KØ8SCA and Dave, WD5COV</i> Announcements Major Prize Drawings	

Saturday was dedicated to Dxing and Contesting.

The DX forum was well attended (300 plus people). The DX panel did their best to explain the policies of the DXCC program and a few attendees were advocating for change. Several believe that achievement programs for hams licensed in the last two decades are appropriate, as they believe they cannot achieve 340 DXCC entities ever. They may be right unless geopolitics change. What was disappointing to me is the lack of sensitivity of some DXAC members to this issue. No one suggested that the DXCC Honor Roll go away but the program needs to remain vibrant and alluring to attract newer and younger hams.

The Contest forum was less controversial. Four recognized contesters were on the stage: W2GD, K3LR, K9CT and N6AA (Dick Norton). Most of the opinions were typically a 3 to 1 split with one member waxing about the need to return to the 1970's without packet clusters and without spotting. Real time contest reporting and real time scoring appear to be on the precipice of gaining enough traction to emerge as the latest change. The next few years will tell.

There were only a few vendors at the Exhibition Hall. Icom and Kenwood did not display. Icom was at a non-ham radio show in Canada. Kenwood was not ready to return to the ham market until Dayton. Yaesu, Flex and Elecraft all came with a large team. They were busy during the show. No new products were announced but those three companies appear vibrant and in good shape. The CEO of SteppIR, John Mertel was there and answering questions. Ham Radio Outlet and other vendors were there. This show offered plenty of face time with the individual vendors. I was able to spend ½ hour with Eric Swartz at Elecraft learning about the soon to be released K40 and remote software. Yaesu had their new entry level SDR on display, the FT-710. It along with the other Yaesu rigs are all the top ranked ones by Rob Sherwood.

Saturday evening, we were entertained by Adrian, KO8SCA, David WD5COV and Mike AB5EB who shared for about two hours the Bouvet experience. It was a spellbinding story and all left appreciative of the effort, work and success they had. Kudos to all of them for the risks they took and the personal investments each of them made north of \$25,000 apiece. Wow.

The IDXC has lots of prizes and I won a power meter. TSA allowed me to bring it back home and it is in my shack, with gratitude to the donors for IDXC. It is the first major prize I have won at a meeting.

Our friend and club member Glenn Johnson W0GJ closed out Visalia with his talk on Sunday morning "What is a real ham"? We will leave it to Glenn to share those secrets with you.



A bonus while there

Our friend Dave Anderson, K4SV, is a prominent YouTuber now with 15,000 followers. He is an expert on all things EV. He had driven his Tesla Model X from Tryon, NC to Visalia in full self driving or autonomous mode. He drove us around Visalia in full self driving mode. It was something to experience as the car drives itself, stops appropriately at signs, red lights and can merge with traffic. Pretty cool. Fred and I each took turns driving it on the outskirts of Visalia, in the Tesla Ludicrous mode. The Ludicrous mode allows acceleration from 0 to 60 in 2 to 2.5 seconds. It is everything you can imagine and more. And yes, it does get to 60 in that rapid of a time period. It feels like take off in a jet at MSP. The Tesla Model X is an amazing and comfortable car. I think we both decided to wait on ordering one until they come installed with an HF rig, antenna and a Begali paddle though.

I can recommend Visalia to any of our members. It is a great experience and one that you won't forget.



Visalia Banquet Crowd

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Interview with Alena, OK4YL, and Jiri, OK2RZ.

I worked both Alena and Jiri and realized that they were a married couple. So, I HAD to send them an interview request.

Hi Bill and thanks for the very interesting email. I am aware of SWODXA's activities and very much appreciate them, as do other HAMs.

I am writing with the credentials of Alena, OK4YL with whom I have been sharing for two years not only HAM SHACK. I was widowed 3 years ago after almost 50 years of very happy marriage to Mary. Alena and I were more than just good buddies at the radio club in the late 60's. We found each other after more than half a century and Alena has also been a widow for 20 years.

She has returned to amateur radio activity after more than 40 years and is perhaps the most active YL on the SW bands today. She works SSB, CW and FT8 on all bands and has 84,000 QSOs in 2 years with over 250 DXCC countries in her log. Adding her DX activity even in the 70's, she is only missing the last 7 countries in the DXCC 300 (ALL TIME).

Thanks again for the opportunity to greet all readers of the SWODXA newsletter . Wishing you good health and good fun on the radio

Alena, OK4YL and Jiri, OK2RZ

I first got into amateur radio in 1962 in elementary school. In the neighborhood of our school lived, and still lives, Franta and Zdena Vondrák, OK2VF and OK2BBI / OK5YL , who brought up many other operators in the OK2KHF radio club. They are still the most famous married couple of amateur radio operators in our country.

I learned telegraphy and later taught CW to other operators at our radio club. In 1967 I got my OK2BLI license and started DXing mostly on CW and SSB for a total of about 10 years. Then for family reasons I was not on the air until 2021. By then I had been a widow for over 20 years and when my good friend from my youth Jiri, OK2RZ was also widowed, we found each other after 44 years and started a new life together, not only as radio amateurs. Today I work CW,SSB and FT on all HF bands.



OK4YL Interview (cont.)

The main gate at Tanabe castle is massive. Thick beams and heavy hardware make it a secure opening into the castle. In a large room in the yagura above the gate, is an interesting museum.

On our QTH at HHRR "HAM Heaven Radio Ranch" we have today only 3 towers and couple of monobanders. 3el full sized yagi for 40m on 60ft boom, 5 el yagi for 20m on 50ft boom and 5el yagi for 10m. Under construction is a new set of antennas for 20-10m including a 17el 4 band yagi and a set of monobanders for 10m and WARC bands. There are also 4SQ for 80m, delta loop for 160m and beverage antennas.

Jiri, OK2RZ has been building towers, masts and antennas at HHRR for 28 years and in that time has tried and operated countless classic yagi antennas and wire beams inc. 4el for 80m. HHRR is an experimental QTH not a setup for multi band operation. The maximum single band setup was from 1999 to 2004 for 10m band. There were a total of 8 monoband yagis on 5 towers with 45 elements.....

As of 2013, everything is remote controlled from HHRR and 99.9% of the time we transmit via RC from our home which is about 10 miles away. We use a private 5 GHz data link for control, not just the internet.

RC is becoming quite popular in the Czech Republic because, like there in the US, restrictions on antenna construction are getting tougher and the level of RF interference in cities is greater.

I myself contested almost half a century ago, now I am in the contests only for fun and usually only 10 to 15 hours out of a contest weekend. Jiri was a very active contester in the 70's and 80's and won several EU trophies in CQWW and CQWPX contests and was in the World TOP TEN CQWW and CQWPX both CW and SSB. But that was a long time ago. Today we contesting together in the unofficial family category 2 ops 1 radio and we don't publish the results anymore.

Today's station OK4YL and OK2RZ at home is very simple. The almost invisible TRX TS480HX little front panel is in the hamshack, along with a couple of PC monitors and the rest including few OM Power amps and all the antennas are far from our home.

The easiest and most challenging way to succeed in pileups is to work hard on antenna systems for a few years and then be well audible around the world. Then all you have to do is apply the experience gained from listening to the endless pileups of DXpeditions and success is almost certain. Experience gained from years of operation is equally important as big antennas and FLP.

OK4YL Interview (cont.)

As everywhere in the world, we both were trying to attract new young operators in OK. We have tried it ourselves unfortunately in vain on our children and grandchildren and we have 9 of them in total.....The chances are much better for digi modes, but this kind of operation is not really about communication between radio amateurs anymore.

When I became very active after almost half of a century I soon found out that the classic paper QSLs were "dying". In OK4YL log I have over 80,000 QSOs in 2 years time CW,SSB,FT. On LotW there are confirmed 45,000 QSOs , on eQSL confirmed 36,000 QSO including 268 DXCC countries and 980 counties of USA and I got only 300 paper QSLs from OK QSL bureau so far. I will always reply quickly and gladly to any paper QSL sent via bureau or direct.

We are happy to share our experience of operating on the bands , but there are very few young people interested. And most of them are rather interested in digi modes and there we also gladly and often accept advice of younger and more experienced in the field of PC and IT.

Amateur radio is still a nice hobby, especially if you can do it with a life partner. And especially if you can immediately share the joy of QSOs with new countries and new friends in the world. Also remembering the old golden ages of AR with common friends we have for past 60 years is wonderful and motivating for further activities.

With that, we extend a warm hello to the readers of your newsletter , to all friends from the band and look forward to QSO with many new HAMs as well.



Alena, OK2BLI in 1967. Home brew TRX made by OK2LC and OK2AOP

OK4YL Interview (cont.)



OK2BLI in 1973. TS 515 and 3el 3bander at the roof of 30m high apartment building. Very rare set up in OK land then, we were not able to buy any radio or antenna then. Quite difficult to buy it outside of Czechoslovakia



Got together again after 44 years since they last met at OK5CRC.

OK5CRC activity at OK2KOS Radio Club of Ostrava

The crew in 1977:

Only Leo, OK2RN and Jiri, OK2SSS now OK2SS are still active

Jarda, OK2HZ and Franta, OK2SFS were big DXers, both Silent Key

Jiri, OK2AOP, well known DXer, quit the activity years ago

Japanese Castles on the Air—JACOTA

Castle #3—Tanabe Castle *by Greg Cook, JO3SLK*

This is part 4 of the Japanese Castles on the Air program submitted by Greg Cook, JO3SLK,. Thanks to Ray, N9JA, for connecting us for these great articles.

This month's JACOTA article is about operating at Tanabe castle. In 1570 Oda Nobunaga ordered Hosokawa Fujitaka to build this castle. Fujitaka destroyed his own Miyazu Castle and moved to Tanabe Castle while his son Tadaoki fought on the Tokugawa side at The Battle of Sekigahara in AC 1600. Around 15,000 attackers aligned with the Ishida clan surrounded Tanabe Castle, which had only 500 defenders commanded by Fujitaka. After 50 days of fighting, Fujitaka surrendered the castle after the emperor acted as an intermediary to help save him. Kyogoku Takatomo became the new lord of the castle, and then Makino Chikashige became lord in 1668. Makino built the current stone walls and gate. The Makino clan continued to rule until the Meiji Period, when many castles were abandoned or destroyed.

Tanabe castle is located in Maizuru city, Kyoto prefecture. I operated there at the end of February. I originally visited Tanabe castle in November of 2020, to see the castle and ask for permission to operate. The castle has very easy access with a large parking lot about 100 meters to the north. The park around the castle is open all the time, and the museum opens at 9:00 am. There is a wide open bailey (yard) where you can toss a baseball, kick a soccer ball, or race RC vehicles.



Tanabe castle

Japanese Castles on the Air (cont.)



Main buildings that remain of Tanabe castle

The main gate at Tanabe castle is massive. Thick beams and heavy hardware make it a secure opening into the castle. In a large room in the yagura above the gate, is an interesting museum.



Tanabe Castle Yaguramon gate

Japanese Castles on the Air (cont.)



Yagura inside the castle grounds

To the east of the yagura is a very nice garden, using part of the original moat. Lots of trees and shrubs are planted, plants make it a peaceful place to visit.

Station at Tanabe castle

The 6 meter band is popular in Japan, so for this portable operation I chose to operate HF using the AL-705 Magnetic Loop Antenna (MLA) and 6 meters using a 3 element Yagi. The 6 meter Yagi antenna can be built with the components that come with the Deluxe Buddipole® system, the optional 6 meter Yagi kit, and other accessory components. The parts and assembly are detailed later in this article. I chose a location not far from the castle building and gate, on a small rise on the main bailey. All of my equipment was brought in



Part of the original moat and the garden

Japanese Castles on the Air (cont.)

using my cart.



Operating location on the castle grounds

The antenna is very easy to assemble and is easy to carry for portable operations like JACOTA. I alternated between operating on 6 meter SSB and HF, mainly on 40 meters, SSB.

Loop antenna tuning box modifications



As I mentioned, tuning the loop is critical and sensitive. Just a slight adjustment of the knob moves the resonate frequency of the antenna. I felt the knob was too small for slight changes, so I glued a large rubber washer onto the plastic knob.

The forecast was for sunshine, so I brought my umbrella and later clamped it to the tripod. I am glad I brought it, as the sun later got bright, and it got a little warm. I set up the Yagi as the main antenna and the loop antenna on a camera tripod as a sub antenna. I also attached the IC-705 to a light plastic tripod and placed it on the folding camp table.

I brought the AL-705 loop antenna for HF operation on the 40 meter band. Loop antennas have a very narrow bandwidth and tuning them to the frequency you want to operate on is necessary each time you change frequencies. The narrow bandwidth makes reception very clear and reduces the noise. The challenge is tuning for low SWR to transmit.

The AL-705 Loop antenna worked well mounted on a standard camera tripod.

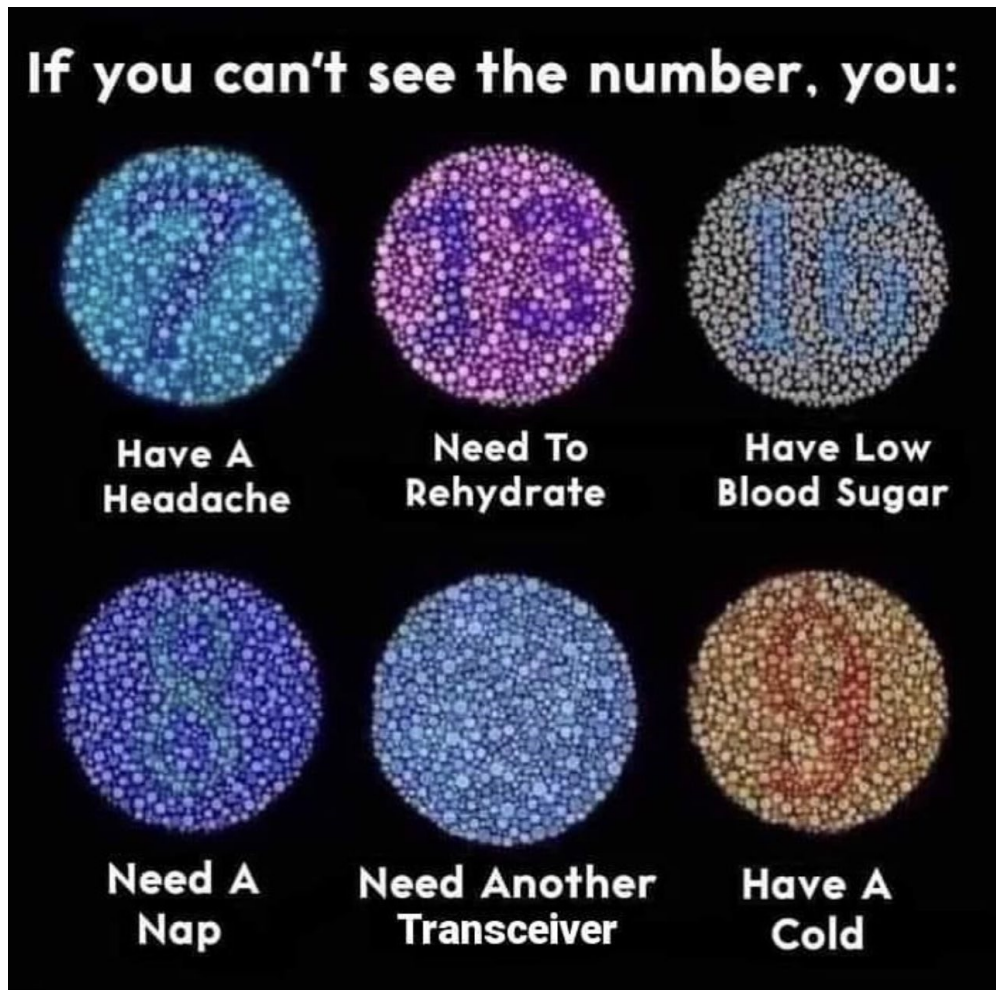


Japanese Castles on the Air (cont.)

I added a nylon base and tie wrap to the tuning box to keep the coax cable straight down the back of the box. I also got a smartphone bracket and clamped it to the bottom of the tuning box. I added a strip of double sided tape for extra stability. There is another brass tripod mount socket on the bottom of the bracket.

Operating from a historical site is always fun and operating from Tanabe castle was both fun and rewarding. Several visitors approached me and asked, “what are you doing?” Some knew about Ham radio, but others did not, and all were very curious about the equipment and listening to me operate. Morning was more productive than the afternoon, and as it got warmer, I had to take off my jacket and put up the umbrella. I told the castle staff that I would be at my operating spot until about 2:00pm, and so around 1:30 I stopped and began taken down the station and loading up the cart. At exactly 2:00pm I said goodbye to the castle and made my way back to the parking lot and loaded the equipment into my car to begin the 2.5 hour trip back home. I got home a bit tired, but excited about planning the next JACOTA project trip to another castle.

The next castle I am going to Akashi castle soon to ask for permission to operate there. I will also take some pictures of the castle.



Dayton 2023 – Crowded!

By Scott Wright—K0MD

I attended Dayton this year for Thursday and Friday. I typically attend Contest University and the DX dinner on Friday night. Lately I have not been attending the Contest dinner due to the food service at the Hope Hotel. This year I had a work trip to Germany which required me to leave Dayton on Saturday so all Saturday activities were off limits. I flew into Dayton on Wednesday from a work meeting in Baltimore. I met several friends – K4SV, K1IT, WU4E, W9IXX, KC8CKW—Mindi, W8KJ—Kevin and AJ8B of SWODXA and Steve and Jessica Molo (of Gigaparts) for dinner. It was great to see old friends, and make some new ones!

Thursday, I attended Contest University with 400 of my closest contest friends. I ran into two Minnesotans, Pat K0PC and Jeff W0JM. It was great to see two fellow TCDXA/MWA members there and catch up with things for a short time. The talks and teaching at Contest U were probably the best I have experienced since I started attending in 2008. Tim Duffy, Bob Wilson, Frank Donovan and the rest really do pack a lot of material into one day. I had a brief trip to the Xenia Fairgrounds over the lunch break with the NCJ Editor, Lee Finkel, KY7M so we could pick up our parking passes and name tags. It was great getting a bite of lunch with Lee and hearing how things are going with NCJ.

Friday was my only day at Hamvention and boy was I ready! My description of the experience, in a word, Dayton 2023 was CROWDED. The large attendance was back. Friday was jam packed, at least in my experience. It took an hour for me to drive from the hotel to the fairgrounds, as the last 2 miles were 40 minutes of the hour-long commute. I was moderating a session at 1020, and was concerned I might be late! Fortunately, I had picked up the presenter so we were either late or on time, together. Our forum was on the K4D user group, where Bob Wilson taught new K4D owners some tips and tricks, and Eric Swartz updated the audience on new things to emerge from Elecraft later this year. I am impressed with all of the food vendors that the Hamvention team are able to organize and this year was no exception. I counted over a dozen food types available, along with specialized lemonade and ice cream stands.

The exhibition halls were crowded with a lot of hams working to meet vendors and see what was new. Kenwood announced a new color LCD HT, likely to be in the 700+ USD price range. Icom announced two new products: a monochrome HT for 2 meters and 440 Mhz, (no price or availability announced) and a UHF (2 m – 1200) rig using the 705 form factor, a multi-band rig in a single box with a variety of antenna options, all for the low price of \$ 3600.00 + at your local ham dealer. The long-awaited PW 2 by Icom continues to be a concept only amplifier at this time. Yaesu continues to offer more HF and VHF models than the other vendors; I believe they had a new mobile VHF/UHF rig on display. As usual, Yaesu drew a big crowd, all in a queue for a ‘free hat’. Flex did not have anything new this year that I saw.

Dayton 2023 – Crowded! (Cont.)

Elecraft indicated that they had caught up on the backlog of K4D orders; orders placed at the show would have a 2 to 4 week delivery time table. Their KPA 1500 amplifiers were in stock, while the KPA 500 amplifier is on a backlog of a few weeks. Every vendor continues to cite supply chain shortages as the limiting step for innovation and manufacturing.

The Begali display continues to draw standing room only crowds of hams admiring their entire paddle line-up. As usual, Bruna Begali was there to answer questions and pose for pictures with her many customer fans.

DX Engineering had a larger display this year than at any time in the past, along with many new products and product lines. I believe they must have had 40 staff on hand to help with questions and process orders. I ordered some beverage supplies from them. The supplies shipped out Friday and arrived at my QTH before I could get home.

The ARRL was well staffed also. Our very own W0VTT was on duty checking DXCC cards for Friday and Saturday. I am not sure Mike got to see any of the show otherwise! I also made a trip by the RSGB, another society of which I am a member. They were courteous, and even gave me a new issue of RADCOM to read on my transatlantic flight for Saturday.

Friday night was the big SWODXA DX Dinner. I sat beside W0VTT so we had a chance to catch up and chat with some new folks as well. The speaker did an excellent job, as his talk was funny, focused and it finished on time! Neither Mike nor I won any big prizes, but rumor has it that the The Exchange editor came away with something...

Dayton 2023 was a great experience and I hope to see you there in 2024.

Thanks Scott! Scott was correct. The attendance was finally announced to have been 31,367—2,000 more than last year and the most ever at this venue.



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TN5K—DXpedition to the Democratic Republic of the Congo

Thanks to TN8K for sending this along. As you know by now, TN5K was voted the 2022-2023 DXpedition of the Year. Written by the TN8K team. English translation by OK1DIX.

The Congo (prefix TN, full name: the Republic of the Congo) - is located on the west coast of Africa in the equatorial region. It is very similar in size to Germany, but for how big it is, it has just under 5 million inhabitants. Although the official language is French, the inhabitants speak the Kituba language. The country is quiet from a security point of view, unlike its "related" neighbor, the Democratic Republic of Congo – 9Q. TN is ranked 80th on the Clublog's "Most Wanted" list.



The Congo is a country we have been thinking about activating for years. But only now we have managed to implement a rather difficult project. It did, however, turn out a little differently than initially planned, but let's not get ahead of ourselves.

The basis of every expedition is always a ham radio license. Unless there is a license, or at least advanced negotiation, there is no point in taking any further steps. The first emails to the authorities in the Congo to obtain the license were sent in December 2021. The actual expedition was then planned for September 2022, time enough, it seemed. But, as it often happens with African institutions, communication was slow and for a long time, we were unable to get it.

In the meantime, we were looking for a QTH. As usual, several hours were spent pouring over maps and doing Internet searches for a location that would be optimal for our needs, yet not too far from the airport. We finally succeeded.

On June 23rd, 2022 we concluded that we would be able to get the license in time and took a risk by buying flight tickets for September. As fate would have it, after many urgings and e-mails, on June 18th we received two individual licenses for TN/OK2ZI and TN/OK6DJ which were unusable for the expedition. It was clear that obtaining the club license as we requested would drag on, so we re-booked the flights for January 2023. It took another two months until the club license with the TN8K callsign finally arrived! The very next day on September 16th, 2022, the expedition was officially announced and featured in amateur radio newsletters and on Facebook.

TN5K DXpedition to the Congo (Cont.)



Time passed and in our minds, we were slowly drawing the setup that we would bring with us to the Congo. It was clear that in terms of equipment, this expedition would be the biggest we had ever undertaken and also that it would be the most expensive project. On November 15th, 2022 the regular pre-expedition meeting took place at Peter's QTH in Ritka. All of the antennas had been checked and packed in the four special bags and the passports of all participants were sent to Paris for visas. They returned in a reasonable amount of time on December 19th with the visas pasted in.

The meeting of the whole team consisting of Petr OK1BOA, Palo OK1CRM, Petr OK1FCJ, Pavel OK1GK, Ruda OK2ZA, Ludek OK2ZC, Karel OK2ZI and David OK6DJ took place on the morning of January 5th at Ruda's QTH. Since we didn't want to risk the morning traffic on the D1 highway, we all arrived in Moravia during the previous evening and spent the night partly at OK2ZA's place and partly at OK2ZI's place. The final packing and transporting of trunks and cabin baggage took place on the morning of January 5th and shortly before noon, everything was ready. In total, seventeen 23kg pieces of baggage and eight 12kg cabin bags were prepared. At noon, we then set off in the hired minibus to the Vienna airport. Check-in was relatively smooth, as were the flights from Vienna to Paris and then two hours later from Paris to Pointe-Noire, with a stopover in Luanda (Angola).

The first major problems came after our arrival in the Congo, where we passed through health and passport control without any problems but were held up because of our "suspicious baggage." Although we had all of the necessary documents and the support of an official at the airport, it was not without nearly two hours of complicated negotiations. Pierre, the owner of our QTH, who was waiting for us at the airport and was present during the negotiations with customs, helped us a lot. In the end, our baggage was released, except for one trunk that didn't arrive at all and contained, among other things, 350m of coaxial cables, a very important piece of equipment, which was also almost half of everything we were carrying.

In front of the airport, we got into the prepared cars and started the 20 km-long journey to the QTH. It took almost an hour through the clogged city both downtown and along rural muddy roads.

TN5K DXpedition to the Congo (Cont.)

The QTH was located in Pointe Indienne – a shark fin-shaped promontory that juts out into the Atlantic Ocean. The rented house – was in the northern part of the promontory, 500m from the coast, where there was an open profile with no elevation on any side. The direction to the EU, NA, and JA even sloped gently towards the coast. The house had a large garden (100×60m) surrounded by meadows and pastures, with the possibility of building antennas arbitrarily in the garden and "reasonably" in the surrounding area. There was no power connection in the QTH, but with the powerful 30kW diesel generator this was not a problem. As it turned out, the generator worked perfectly, except for one glitch, and it consumed altogether 1,200 liters of diesel during our stay. We had a cook and his family at the lodge who took care of our meals and provisions, so we could concentrate solely on our objectives.

We arrived in the QTH on January 6th at 13:00 local time. Since we wanted to be QRV on the lower bands already on the very first night, we immediately unpacked our bags with the antennas and started building. During the afternoon we had built a vertical for 160m, a vertical for 40m, a vertical for 30m, two Spiderbeams, and in deep darkness we finished also the vertical for 80m. All of the verticals had ten quarter-wave radials. The 30m and 40m antennas were temporarily set up near the house, just for the first night, knowing they would be relocated later.

After dark, we then converted the main room of the house into an operator's room and installed eight workplaces: a K3+Expert 1.3K-FA, a SunSDR2DX+JUMA, a SunSDR2pro+JUMA, an FT-DX10+JUMA, an IC-705+JUMA, another IC-705+JUMA, and finally the remaining two TS-480HXs, which were primarily intended for 6m and FT8/FT4.

The first contact under TN8K was made by Petr, OK1FCJ on 20m CW. We were working all evening on several bands, but the fatigue from the hard 24 hours of travel and building antennas was evident in our traffic. We still made almost two thousand contacts by midnight. The pile-ups were huge on all bands, so it was clear that we would not be bored.

January 7th, 2023

In the morning, part of the team was working on the antennas. First, we moved the 40m antenna away to a meadow outside our property and upgraded it from a simple vertical to a two-element phased array. Then, we also moved the 30m vertical up to the fence for the final position and upgraded it to a two-element phased system. We erected mast #3 with a trio of two-element duraluminium Yagis for 17m, 15m and 12m and then mast #4 with five element for 6m and four element for 10m. We couldn't build the last fifth mast because of the lost trunk which contained the center of the last Spiderbeam.

We stretched a receiving loop on the ground, which we hoped would help us listen on the lower bands. Suddenly a thunderstorm and windstorm came in the afternoon. Fortunately, all of the antennas survived, except for the 40m vertical which fell to the ground. Thankfully the repair only took a few minutes.

TN5K DXpedition to the Congo (Cont.)

At 1600 UTC the storm was over, all damages had been repaired, and the SWR of the antennas checked. After that six stations were in operation simultaneously – 30m+6m on FT8 and 20m+17m+15m+10m on CW.

The last thing we managed to do that day in daylight was to build an RX-point behind the fence, to which all of the beverage antennas were connected. We stretched the first one, 150m long towards the EU later that day. During the day we took turns at the radios and although we spent a lot of time working on the antennas, we managed to make over 10,000 contacts thanks to the brisk CW traffic. The pileups were massive. The familiar "big guns" we worked during the start of every expedition were calling. The joy was spoiled a bit by unusual number of the undisciplined callers, which slowed down the traffic considerably. The beverage antenna was tested at night, and it worked well, but atmospheric QRN from nearby thunderstorms made listening extremely difficult.

January 8th, 2023

In the morning after dawn, we put up another antenna, a 20m wire dipole, which was pulled through a pulley to the middle of the 160m vertical. Thanks to this the coax cable from the 160m antenna did not "slack" during the day and was connected to this antenna. This helped increase the work efficiency on the 20m. This also allowed all of the Spiderbeams to be on the upper bands during the day. The 20m band behaved typically for the area, with conditions gradually deteriorating during the morning and not working at all by midday. Even on the FT8 frequencies, nothing was heard and the band only started to open up in the afternoon. Progress was also made with the receiving antennas and two more 150m beverages were stretched towards JA and NA. Some of the team then also went to test the local sea. The beach was sandy and beautifully clear, the water relatively warm but somewhat murky. We also learned that our lost trunk had arrived, but as it was Sunday and the special desk at the airport for such cases was closed we had no choice but to wait until the next day. The number of contacts was increasing rapidly and by midnight there were almost 30,000 QSOs.

January 9th, 2023

The event of the day: they retrieved the lost trunk. We immediately unpacked it and took what was missing to complete our station. We assembled the eighth workplace, which was missing a power supply with wiring for the K3, and began preparing the Spiderbeam, which was the only one of the three tuned to the SSB parts of the bands. However, it could not be completed by dusk and so we postponed it until the next day. As far as possible one station was in operation permanently on SSB, three to four stations on CW, and two on FT8. Then during the day one of the stations was allocated to 6m FT8 and although we weren't very hopeful of making any contacts, we still logged the first 19 stations on this day. When we got information from the VK hams that our signals were passing into their area we gave short-term CQ VK/ZL to allow them to make contacts, as their signals were weak, and breaking through the EU or NA pileups was almost impossible for them. Unfortunately, here too we have often encountered a

TN5K DXpedition to the Congo (Cont.)

lack of discipline on the part of the callers who simply did not respect our directional CQ. We did our best and by the evening there were over 40,000 QSOs in the log.

January 10th, 2023

This time the whole night was very quiet. Almost no QRN on the lower bands. Unlike the previous nights the 80m band worked great and conditions were good. On the contrary, surprisingly, 160m didn't work at all. The conditions were similarly miserable also on the upper bands in the morning. During the day we finished the remaining antennas. We put up the last Spiderbeam for SSB and set up a quarter-wave vertical for 60m band in a meadow far beyond the property line. There was a lot of interest in the contacts on this band, and we made over a thousand contacts there on the first night. The only nuisance was that we had to disassemble and modify the IC-705 TRX, as it had the 60m band blocked from the factory and we had to modify the setting following the instructions on YouTube. Later in the afternoon, when it was not so hot, we built a two-element vertical system for the 40m band pointing to NA and another vertical for the 30m band. These antennas were planned, but without the coaxial cables from the lost trunk, there was no point in building them earlier. We have also managed to establish the first satellite link via QO-100, which was our premiere on this band and certainly a premiere in the Congo. We had asked the owner of the facility to purchase a satellite dish antenna for us in town. In the meantime, we had been transmitting provisionally only with the feed pointed at the inverted lid of a large pot. In order to maximize our potential, we also installed the last "backup" workstation with IC-705+JUMA and so that evening the call TN8K appeared for the first time 9 times simultaneously on the air, with seven stations working in "human" modes and two on FT8. These FT8 stations were operated by operators in parallel with CW or SSB traffic on their tablets.

January 11th, 2023

Every day in the morning the upper bands worked fine to JA and so we gave these stations plenty of space. We tried the simultaneous operation of three stations on the 15m band – CW, SSB and FT8. With minor problems, it worked, mainly because FT8 was transmitting into the vertical antennas for 40m. This antenna works satisfactorily on 15m and thanks to vertical polarization there was no problem with mutual interference. After lunch, we stretched the last beverage 150m towards VK and decided to extend the JA beverage by another 100m. But that was easier said than done, as it turned out, what looked like a meadow was actually a swamp covered with grass and pulling 100m of wire and quarter wave radials took over an hour. If we had known what kind of terrain we were getting into, we might have changed our minds. We also took a commemorative photo to mark the 60,000 contacts in the log that day. The afternoon conditions were very good on the upper bands and lasted until midnight when the 10m band was still full of stations. Unfortunately, towards the evening, there were heavy thunderstorms which swirled around our QTH and so listening in the storm QRN was very tiring. After midnight the storm was so intense that we had to make QRT for a while and disconnect all antennas to prevent possible damage to the equipment by static electricity.

TN5K DXpedition to the Congo (Cont.)

January 12th, 2023

As soon as the storm subsided we got back to the stations, but shortly after the traffic had started it was over again because there was a power outage. The generator stopped working unexpectedly and did not start again. Just after dawn, the staff started working on the repair. It was found that the V-belt had broken. Fortunately, we managed to get it in town, but even so, the repair took almost the whole morning. As a result, our "unwritten" goal of 10,000 contacts per day was not met that day. We were also told that the dish antenna could not be found in any shop, so the owner of the building allowed us to dismantle his satellite dish from the wall and use it for QO-100, of course on the condition that we put it back at the end of our expedition. We also moved the RX loop further away from our facility, using the last piece of coaxial cable we had. At night, traffic continued on the lower bands and the beverage antennas were also used on the 60m workstation, where we worked on CW for a few hours, and many new stations were logged on this band.

January 13th, 2023

The conditions were weaker on the upper bands in the morning. Then another cloudburst came through and mother nature showed us her power. The floodgates of heaven opened, and the rain drummed on the tin roof of the house with such force that even the reception in the headphones was heavily distorted. We had to cut off SSB traffic entirely because the microphones were picking up the noise so intensely that the operator's voice was almost lost in it. On the other hand, the conditions were excellent in the afternoon and evening after the rain. Yesterday's 60m traffic lured us in, so we continued CW that day, but listening on the vertical was difficult due to equatorial QRN. Virtually every mark was broken by the crackle, and we had to have everything repeated at least once. We also had to accommodate the CW speed which further impacted the rate. Despite this, there were over 90,000 QSOs in the log at midnight. We were enjoying amazing conditions with all bands open at once, from 160m to 10m. This is something that is very difficult to experience in Europe.

January 14th, 2023

The first technical fault occurred – the band-pass filter on 15m was gone. We had three complete sets of 200W band-pass filters with us, so losing one was not a significant problem. Each workstation is always equipped with the appropriate filter and in case of extreme interference, we connect two filters in series, albeit knowing that it causes a bit of attenuation in the RX path. We experienced interference, especially when using the antennas on the same mast, just above each other. Performance-wise the filters didn't do any harm as they were connected between the TRX and the PA, and the TRXs had always enough power to drive the PA. Another significant goal was reached on this day - 100,000 contacts in the log. We briefly interrupted the traffic and took a few commemorative pictures, which we posted on our Facebook page.

TN5K DXpedition to the Congo (Cont.)

January 15th, 2023

There was rain again in the morning, sometimes very heavy. There was so much water that it did not even soak into the sand that was in the yard next to the house. Streams of water flowed under the antennas and disappeared somewhere behind the fence. Fortunately, it didn't affect the propagation conditions. The 10m band was working nicely since the morning and so we gave FM operation on 29.050 a try, which we had never done before. It was an interesting experience for everyone. Even during the morning, the number of contacts from our most successful S9OK expedition so far in 2021 was surpassed. After lunch, we had a visitor – two neighbors on whose land our verticals for the lower bands stood. Getting along with them was absolutely smooth, the gentlemen were knowledgeable and listened with interest as Karel, OK2ZI explained in French that we were a non-commercial group promoting amateur radio and advertising the Congo to the world. With a promise that the antennas would be gone from the property within a week, and everything would be cleaned up, they thanked us for the explanation and left with a friendly nod. The thing almost unprecedented for Africa is that someone would allow you to do something for free.

January 16th, 2023

The lower bands were working well at night, but there were not as many stations in the log as there could have been, again due to the greatly undisciplined callers, especially on 80m and 160m. Even the Japanese stations, which are usually very disciplined, would lose their inhibitions on the lower bands and call over each other. In the morning the upper bands worked nicely and there, on the other hand, the traffic of JA stations was exemplary. Europe was of course a mess as usual. More and more often we were encountering the annoyance of calling stations putting their callsigns twice in a row on CW. This was extremely annoying because the operator usually gets the callsign the first time and thus transmits in "stereo" with the caller when sending the report. As a result, the caller does not respond to our report, and we have to repeat the entire session unnecessarily. There's no reason to do that, especially on bands from 40m upwards where the signals tend to be stable and are not significantly affected by the atmospheric QRN. On the other hand, on the 80m and 160m bands, stations that call with their callsign twice gain an advantage. There's more time to exactly tune on their signal and receive the callsign on the first go.

January 17th, 2023

There was another goal reached on this day – 140,000 QSOs in the log. We were thrilled with how the number of contacts was increasing and how the callers were checking the empty fields on Clublog. However, our joy was somewhat spoiled by the fact that the expedition was fast nearing its end. The pileups may have been a little weaker at that time, but there were still so many callers at the opening peaks that we would have had plenty to do even if the expedition had lasted a month. Today was the last day of the QO-100 operation, with over 1,500 contacts in the log. We were regularly monitoring propagation conditions. The report showed aurora and A=14 that day which made upper bands almost non-existent. We had another unexpected visitor this afternoon, a large herd of cows

TN5K DXpedition to the Congo (Cont.)

came in over the pasture and messed up our radials for the 80m and 160m verticals. It might seem like bad luck, but we should rather say lucky that they came only once and only towards the end of the expedition. We had studied YouTube videos of the area before selecting the QTH and knew that herds roamed freely in the surrounding pastures and were concerned if verticals could even be installed there beyond the fence.

January 18th, 2023

The end was near, it was the last day of full operation. More and more stations were now devoting themselves to SSB at the expense of CW, where there were already nearly 50,000 contacts in the log. Once again, we encountered the annoying nuisance of stations on SSB calling with just a suffix instead of the full callsign. This causes unnecessarily delaying and annoyance for the operator. This behavior is typical for stations from South America and Europe, especially from its southern part. It is not the case in the USA and certainly not in Japan. In the morning the conditions were poor, so we took time to take pictures for our sponsors and re-tuned the 80m vertical to the SSB part of the band. We also posted the information that this night would be fully dedicated to SSB traffic on both 80m and 60m, which we were often asked about on the band. Both bands had beverage antenna available for better RX. The RX loop barely worked this time, probably because it was too close to the transmitting antennas. On both of our previous expeditions to S9 and HK0/A the loop was far from everything and worked very well.

January 19th, 2023

We worked all night on the lower bands. It was the last night there. We could feel that many callers were nervous as they knew if they didn't make the QSO now, they never would. A lot of well-equipped stations tried the "trick" and although they couldn't hear us properly, they called repeatedly and even gave the report right along with the callsign foolishly thinking we would log them. Naturally, when we called these stations, they didn't respond because they couldn't hear us. Of course, they are not in the log because the QSO has not been mutually confirmed. Unfortunately, we have to say that even some well-known OK amateur stations also resorted to this ugly practice, and we were saddened by this.

In the morning the packing of antennas started. First the beverages, then verticals for 160m+80m+40m. From phased pairs, only one pair on 30m and one on 40m remained standing. Before dusk, we packed two Spiderbeams. By morning only one Spiderbeam and two masts with duraluminium Yagis remained. On our last night, we were QRV from 40m to 6m with at least one antenna on each band. It rained heavily during packing. On the previous expeditions, the weather was always good for packing, but this time mother nature decided otherwise.

TN5K DXpedition to the Congo (Cont.)

In the meantime, we had received a warning about the transport strike in France which could affect our air transport. Indeed, many flights were canceled, but fortunately, the plane that we were due to return on departed from Paris. We continued to operate, albeit limited, all evening, with over 160,000 contacts in the log. After checking the table on the GDXF website it looked like we might be able to reach 6th place.

In the morning Karel and David briefly activated their valid TN/OK2ZI and TN/OK6DJ personal licenses and made about 200 CW contacts just for fun before they fell into their beds with fatigue.

January 20th, 2023

At 6:20 in the morning, we made the final QRT. TN8K was history. The log showed a fantastic 164,939 contacts. We quickly lowered all the remaining masts and the whole team, although very tired, started dismantling them. By noon everything was packed and tidied up and a photo shot of the whole group took place including the staff who looked after us magnificently. In the afternoon the hired cars arrived and the whole group moved to Pointe-Noire, where Pierre booked a restaurant and invited us to lunch together. Then it was time to say goodbye and move to the airport, where Pierre arranged for a helper from Air France to help us check in. However, once again it was not without problems. The check-in took almost three hours. Two of our bags with antennas were allegedly over the size limit, no explanation or persuasion helped. We had to pay an extra fee for oversize baggage, a total of 600,- EUR. The airport staff is corrupt. When checking the baggage by X-ray they were openly demanding bribes. The highlight then was the uniformed police officer who was doing a "check of cash exported out of the country" before passport control and wanted to see all of our wallets. She unscrupulously told each of us to give her some money. Although she claimed not to speak English, she knew the phrase "give me money" very well. She was not interested in the Czech crowns offered, though. We've seen a lot of things on our travels in the world, but nothing like this. We were also surprised by the double check of the contents of our cabin baggage, first at passport control and then again just before boarding. As much as we had a good time in the Congo and liked it the bureaucratic buffoonery at the airport was so frustrating that we wanted to be all out of there. Fortunately, the plane left on time and after a short stopover in Angola and an hour's wait on the airport tarmac, continued to Paris for a night flight. Everyone, even those having trouble with it, fell asleep on the plane from fatigue.

January 21st, 2023

The plane landed in Paris while it was still dark. The transfer to the next flight was without any problems, as well as the flight itself. All baggage arrived in Vienna, but one was damaged, and a claim had to be made. The hired minibus was waiting for us and the journey to Rudy's QTH was also smooth. There, we were warmly welcomed by Rudy's wife with a cauldron of delicious sirloin steak with cream sauce, which we all devoured with great gusto.

TN5K DXpedition to the Congo (Cont.)

In the afternoon, we then went our separate ways home, and at 10 pm the last member arrived. This was the real end of the whole adventure.

We would like to thank all the stations that called and made a contact with us. We couldn't have done it without them, and we believe it was fun for everyone. At least the feedback on Facebook speaks unanimously that it was. Thanks to our host Pierre, who adapted the interior of his house for our needs and provided us, a strange gang from Czechia, with ideal conditions plus allowed us to do literally whatever we wanted with the antennas on and around the property. Thanks to the couple Giselle and Rene who oversaw our food and safety and took absolutely great care of us. Thanks to Murphy who was in our favor this time. The equipment worked as it should, nothing broke except one filter. Most importantly, all the antennas worked as they were supposed to.

We would also like to thank the sponsors, both the organizations and the individuals. Without their help, this costly mission would not have been possible.

Our sponsors: Northern California DX Foundation, European DX Foundation, International DX Association, Greater Milwaukee DX Association, German DX Foundation, Swiss DX Foundation, DX-news, Clipperton DX Club, Far East DX Ploitiers Foundation, Oklahoma DX Association, Mediterraneo DX Club, CDXC UK DX Foundation, Danish DX Group, SDXG, Minnesota TCDXA, Southeastern DX Club, Lone Star DX Association, GM DX Group, OH DX Foundation, Northern Ohio DX Association, National Capitol DX Association, East Tennessee DX Association, Northern Illinois DX Association, Araucária DX Group, Spiderbeam, Mastrant, DD-amtek.

From among individuals, we were supported by a large number of amateurs and we thank them all, especially K0GEO, N1HO, OG2M, OK5MM, HB9FPM A HB9JOE, OK6RP, AC0W, OK1NS, OK1ALX, OK1CF, OK1FPG, OK2MDC, OM3PC, OM5ZW, TF3SG, IK0AGU, OM4TW, OK2IT, OK1NP, N3OC, GM3WOJ, WO9I, ZL1IU, HB9BAS, KQ4DPH, TF3DC, OK2ARM, OK2NMA, WF8R, DK2CF.

The result puts us in 6th place in the official Megaexpeditions all-time ranking (<https://gdx.de/megadxpeditions/honorroll.php>). With thirteen days of operation and only eight operators, this is a spectacular achievement. By the time you read these lines, the QSL tickets are already in production. As soon as we receive them, the arduous procedure of distributing them will begin, which as usual will be taken care of in an exemplary manner by David OK6DJ.



TN5K DXpedition to the Congo (Cont.)

OQRS direct requests have already been confirmed at LoTW. For detailed statistics see <https://clublog.org/charts/?c=TN8K#r>

Equipment used:

TRX: 1x K3, 1x FT-DX10, 3x IC-705, 1x SUN-SDR2DX, 1x SUN-SDR2PRO, 2x TS-480HX.

PA: 6x JUMA PA1000, 1x Expert 1.3K-FA

Antennas:

- 160m vertical with capacitive hat + 10x quarter-wave radials
- 80m vertical + 10x quarter-wave radials
- 60m vertical + 10x quarter-wave radials
- 40m 2el. vertical phased system + 2x10 quarter-wave radials to JA
- 40m 2el. vertical phased system + 2x10 quarter-wave radials to NA
- 30m 2el. vertical phased system + 2x10 quarter-wave radials to JA
- 30m vertical + 10x quarter-wave radials
- 20m - 10m 5-band Spiderbeam @10m
- 20m - 10m 5-band Spiderbeam @10m
- 20m - 10m 5-band Spiderbeam @12m
- 20m inverted V-dipole @10m
- 17m - 2el. Yagi
- 15m - 2el. Yagi
- 12m - 2el. Yagi
- 10m - 4el. Yagi
- 6m - 5el. Yagi

RX antennas:

- 3x beverage á 150m
(NA, EU, VK)
- 1x beverage 250m JA
- RX loop



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***Harry Flasher—AC8G:** In January, one of our founding members and a prominent ham, AC8G, Harry Flasher, passed away. In my two stints of SWODXA membership, I knew Harry but I had no idea of how much he had accomplished.*

Harry's son, Eric, W8KKF (Harry's original call) compiled a moving and complete summary of Harry's radio life and his accomplishments. Thanks to Eric for permission to reprint this.

On January 18, 2023, my father, Harry Flasher (AC8G) became a silent key. After his passing I began finding and cataloging records of his many years of ham radio activity. Obviously, I always knew his love of ham radio but neither he nor I had ever collected or recorded the incredible record of service, operating excellence, contesting, DXing (making distant radio contacts), and mentoring he did during his 60 plus years as an amateur radio operator. This is an overview of his accomplishments in his beloved hobby.

Growing up, my sister and I often fell asleep to the sound of, "CQ contest, CQ contest, CQ contest, Whiskey Eight Kilo... Kilo... Fox." I was surrounded by ham radio my entire life and it had a major impact on my family and me. It impacted where my sister and I grew up—mom still tells the story of the real estate agent being bewildered at the first ever client to ask for a home above a certain elevation (better for VHF contacts). It impacted my career as I was always gravitated towards technology related positions. It influenced our dedication to public service. It changed our understanding of the world as we met and travelled to so many foreign countries for radio contests.

As a child in Columbus, Ohio, Harry spent hours at the local firehouse and was always enthralled with their radios. In 1951, at 17 years old, he travelled to the FCC Field Office and passed the novice class exam becoming WN8KKF. After college at Miami University in Oxford, Ohio, and a two-year service in the U.S. Army (stationed in Germany) he received W8KKF as a general class operator in 1961 and kept the call when he later upgraded to Advance Class. In 2000, motivated by the prospect of vanity calls and shorter call letters (better for contesting), he became AC8G after passing the Amateur Extra Class exam. When he became AC8G, I eagerly waited for the FCC prescribed two-year period and requested his W8KKF call. I even had to drive to work to make the request for the vanity call at midnight to ensure my request was first in line (no internet at home in those days...).



Dad, then W8KKF with me, Eric, a newly minted WN8ATS, 1976.

Harry Flasher—AC8G (cont.)



Dad's shack in one of its many configurations (Circa 1980).

Harry's early years were spent mostly on VHF operation with a special love of 6 meters. He belonged to and was active in several local clubs: The Dayton Amateur Radio Association (DARA), The Miami Valley FM Association (MVFMA), The Mound Amateur Radio Association (MARA), The Miamisburg Wireless Association (MWA), and the Southwest Ohio DX Association (SWODXA). He was a founding member and served as Secretary, Treasurer, and President of SWODXA. He was a long-time member of the Amateur Radio Relay League and a founding member of the International DX Association. He was also active in the local chapter of the American Red Cross and helped create early disaster services budgets.



Dad's station around 1985 with the "new" Commodore 64 added to the ICOM 735

In 1969 he received an Amateur Radio Relay League (ARRL) Public Service Award for his assistance in a tornado in Kettering, Ohio (described in QST, July 1969, pg. 65). This was one of many recognitions including: assisting with communications in a water rescue (QST, July 1973 pg 85), 1974 massive Xenia, Ohio Tornado (QST, April 1974 pgs 54-58 [including a photo of the communications van and him on page 57]), a power outage (QST, April 1975 pg 56), a three-alarm fire (QST, July 1975, pg 75), Waynesville, Ohio Tornado (QST, July 1975, pg 74), assisting during a Dayton, Ohio firefighters strike (QST, January 1977, pg 80), and the Great Blizzard of 1978 (QST, August, 1978, pg 80). He received ARRL Certificates of Merit in 1974 and 1977, and ARRL Public Service Commendations in 1979 and 1980.

Harry Flasher—AC8G (cont.)



Dad with compass making sure a temporary antenna is properly oriented. He loved antenna work and always told me, “you get the biggest signal for the buck with a good antenna.” He always had an HT and a scanner with him.

He was active as a volunteer in the Miami Valley Civil Defense Administration. In the early 70's, he had a vision for a mobile emergency communication vehicle and secured funds, planned, and created a Civilian Defense/MVFMA Communications Van. That vehicle was one of the first on scene in downtown Xenia following a devastating tornado and its VHF equipment was used for dispatch while the damage to the Xenia Dispatch Center's antenna was repaired and power and telephone services restored. He coordinated the eight-day emergency response that provided over 1,000 messages between the ten Red Cross shelters. He also installed the first amateur radio station at the Dayton Red Cross building. [I have fond memories of being a seven- or eight-year-old and fetching tools or connectors and running them up to the roof of the building.] During this period, he also received an award for the Amateur Radio Publications Contest (RF Carrier) and served as Treasurer

and then Activities Chairman for DARA. Additionally, he was the ARRL Emergency Corps Assistant Emergency Coordinator.

He loved organizing events and providing communications services. He helped with numerous Dayton Children's Parades, the Toys for Tots Parades, Veterans Wheelchair Games, and Field Days.

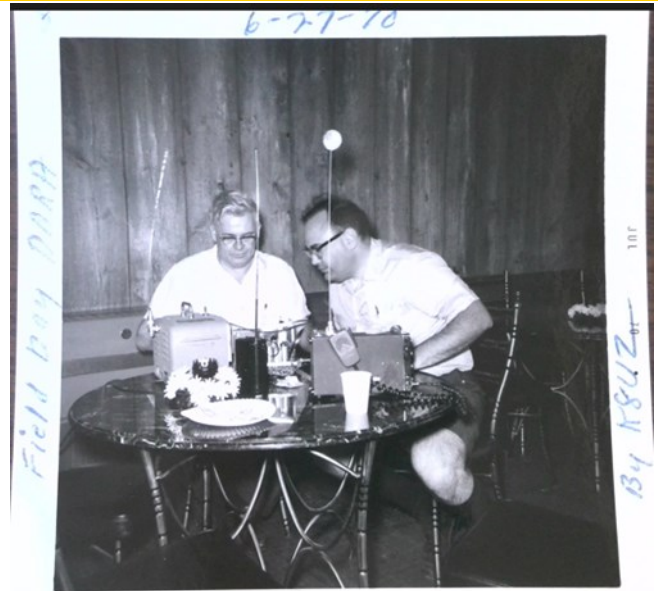
He coordinated communications for the Miamisburg Bicentennial facilitating the two largest parades in the city's history (recognized by MARA with an Award for Exceptional Volunteer Service). Two other events he spent hours coordinating were the Football Score Network and Dayton Hydrobowl hydroplane boat races. He authored stories of that service in QST magazine in the April 1967 (pgs 62-63) and November 1970 (pgs 52-53) issues.



Dad was one of the first on scene in downtown Xenia, Ohio, following the April 3, 1974, F5 tornado.

Harry Flasher—AC8G (cont.)

Wanting to share his passion with others, he welcomed any number of amateur radio friends to his shack and was always willing to help with station design and antenna configuration questions. Visitors to our home not familiar with ham radio would see his station and invariably ask what it was. He would share (sometimes for hours), the wonders of ham radio. He not only shared ham radio with friends and visitors, but he also actively served in all sorts of event ranging from triathlons, Miamisburg's Turkey Trot, holiday parades, and HamVentions. He, for many years, was active at the Dayton HamVention as the talk-in coordinator. I recall going on trips all around Dayton so he could visualize, in advance, landmarks to assist visiting hams making their way to HARA Arena. In those pre-GPS and cell phone map days, he'd have maps of town all over the shack so he could pinpoint their exact location if they were lost.



Dad working with another ham at a 1970 Dayton Amateur Radio Field Day event.

From an early age, I was able to join him on hidden transmitter hunts (fox hunts). My dad, Dick Gummer (WA8YNV), and I would spend many Friday evenings either chasing fires in Montgomery County or finding those hidden transmitters. After the chase, we'd all gather to tell stories of where we heard the strongest signals and how many wrong roads we traversed.

Although he had participated in several contests in the earlier years, he really got the contesting and DXing bug in 1980 after recovering from heart surgery. At the time, you couldn't return to work for three months after open heart surgery and his radio provided a great release while his doctors suggested he not be physically active. My mother, Margie (WD8ATP – she only got the license because she drove me to DARA license classes in 1975...long before I could drive), swore she'd never complain about his amateur radio work as it kept him busy and out of her hair during his recovery.



Dad in the CD Communication Van at the Dayton Hydrobowl boat races

Harry Flasher—AC8G (cont.)

His favorite contests were the ARRL 10 meter, ARRL DX, CQ Worldwide DX, CQ Worldwide WPX, and the IARU HF World Championships. For decades he placed in the top 10 in his section and nearly always won the countries where he operated DX. He was modest regarding his scores. Although he had a handful of certificates on the walls of his shack, I discovered a folder that I had never seen loaded with more contest awards. As I noticed gaps, I used the ARRL and CQ contest databases and found nearly three times more log submissions and viewed the missing certificates.



Working a contest in 1991. It was always hard to tell which he enjoyed more-- DX'ing, DXpeditions, or contesting.

In a 40-year span, he submitted 38 CQ WW DX Phone logs. He, and the DXpeditions he coordinated, scored over 170 million points (171,780,520) with over 130,000 contacts (132,593). I was lucky to join him on many of those DXpeditions along with over 100 other hams: AB8YK, AC8G, CX6VM, DL5AXX, DL6LAU, ES7RE, IK6CAC, IV3NVH, IV3TMV, IV3VIA, J39AL, J88BK, K0RH, K1EP, K1XM, K2DO, K5PN, K6GWO, K6GXO, K6HR, K8CV, K8CW, K8MA, K8QOE, K8RF, K8VAZ, K9AJ, K9FD, KA7KUZ, KA8TKB, KA9RHK, KB0U, KC5AK, KC5DJI, KD6WW, KG6ITP, KI4QCS, KJ4VH, KP2A, KQ1F, KU4J, KY8X, L6GXO, N0AT, N0KE, N0KK, N0RB, N0VD, N2GA, N2IC, N3BNA, N6HR, N6JRL, N7AZ, N8BJQ, N8EEO, N9NS, NC8Q, NE8Z, NH7C, NH7CC, NY8E, TI5KD, V2AU, VE3EBN, VE3RZ, W0CG, W0RLX, W5WW, W6CDR, W6SR, W8GEX, W8ILC, W8KKF, W8OK, W8PBO, W8QF, W8QID, W8QZA, W8RKI, W9FEL, W9IXX, W9SWM, W9WPV, WA2ICE, WA8LOW, WA8NJR, WA8YST, WB8GEX, WB8NBA, WC4D, WD8ATP, WD8ATS, WD8IDZ, WD8MGJ, WT8R, WX9E, WZ8D, ZP5MAL, ZP5MZL. He invited hams to participate regardless of their contesting experience. One ham, Joe Phillips (K8QOE), with virtually no contest or DX experience recorded his experience with my dad in the May 2002 QST (page 53), “A Novice Contester Gets His” on a DXpedition with my dad to Jamaica. I am still amazed that he was able to talk hotel owners into allowing us to climb to the roof and install antennas.

Harry Flasher—AC8G (cont.)



Enjoying a meal on a DXPedition.

but would dig up old logbooks so someone working for DXCC could get credit for a contact from 20 or more years earlier. He had dozens of shoeboxes overflowing with QSL cards.

During those trips, the following calls were used: AC8G, FJ/AC8G, HC8X, J3/W8KKF, J37DX, J37K, J38G, J3A, J80D, PJ2C, TI5A, TI5N, V2ARS, VP2EK, W8BI/VE2, W8KKF, W8KKF/0, W8KKF/C6A, W8KKF/KP2, W8KKF/V2A, W8KKF/WP2, and W8OK/VE2. He kept W4MPY (QSL printer) very busy with card requests. He took great pains to respond to every QSL; sometimes even decades after the contact. He'd fuss about it

Happy hams on a Grenada trip. Oliver Liburb (V44KAO), Ron Hesslebrock [SK] (WA8LOW), Harry Fasher (AC8G), Tony (Grenada licensing authority), Joe Pater (W8GEX), Phil Florig (W9IXX)

He planned



DXPeditions in minute detail: each piece of equipment weighed, and antennas modified to fit in luggage. [2nd left] Findley Gil (J39AL), Dad, Joe Pater (W8GEX), Mike McGirr (K9AJ)

Mom, being an avid stamp collector, loved the stamps he got daily from far flung ends of the earth. As children, my sister and I would run to the globe and see where these far-off islands were and we learned so much about geography. The family hosted hams from all around the world at Dayton HamVention time, and when he and mom travelled to the 83 countries they visited in their 66 years of marriage, it was not uncommon for local hams to beg them to visit their homes, see their stations, and enjoy a meal with them.

Harry Flasher—AC8G (cont.)

He operated DX from Alaska, Anguilla, Antigua, Bahamas, Canada, Costa Rica, Curacao, Dominican Republic, Galapagos, Grenada, Jamaica, Puerto Rico (and Desecheo Island), St. Barts, St. Lucia, St. Maarten, St. Vincent, and the Virgin Islands. The Galapagos led to the number one worldwide score in the 1995 CQ Worldwide DX Contest. He visited the beautiful island of Grenada around 40 times and became good friends with Findley Gill (J39AL). I remember stringing dipoles on crazy slopes and visiting the hilltop prison where he eventually helped setup an emergency communications center for the island. He organized most, if not all, of the DX trips and planned in meticulous detail all aspects of the adventures from transportation, housing, food, station equipment, layout, and antennas. This work made travelling on a DXpedition with him easy. He was a master at gaining governmental approvals and overcoming all sorts of roadblocks as he planned trips around the world. He was featured in WorldRadio (December 2008, page 20) talking about plans for the Desecheo DXpedition. He lit up when he described how his trips helped get rare and semi-rare entities on the air.

His DX work was recognized by SWODXA with the first “Frank Schwab W8OK DX’er of the Year Award”, a plaque for “Recognition for Contributions to Growth & Success” of the club and the President’s Special Award. As he became more interested in DX he became an ARRL DXCC Field Representative. He was a regular DX column contributor to the RF Carrier (DARA) and many other newsletters. He was a featured DX speaker at several amateur radio conventions and coordinated several DX forums.



(Cont. on Next Page)



He and Mom (Margie, WD8ATP), always enjoyed a few hours on a DXpedition learning about and touring the countries they visited (86 in their 66 years together)

Harry Flasher—AC8G (cont.)



He enjoyed getting to know local hams on all his trips.

brings me to tears happened every time—in the middle of a contest while he was quickly working pileups, he'd hear my call and announce, "ALL STATIONS STAND-BY...IT'S MY SON." He'd then stop everything and tell me about how the trip was going. I'd have to beg him to cut it short to let him get back to the contesting he loved. That was his way of saying, "I love you" better than any card could ever do.

His prolific and skilled operational skills allowed him to have a 354 confirmed entity count earning him both ARRL DXCC Century Club and DXCC Honor Role (mixed phone). Because he studied his logbooks, deeply understood propagation patterns, and knew beam headings from heart, he could easily determine when and where to tune for DX contacts. During contests, as one band faded, he'd know exactly when to switch bands to work another set of contacts. His lifetime QSO count was in the hundreds of thousands as testified by dozens of full handwritten logbook and dozens of computer logs.

His belief in the power of amateur radio for entertainment, growth, global awareness, and public service led him to offer monetary support to many organizations. He donated to Radio Lumiere, the New York Radio Club of Junior High School 22 (WB2JKJ), and to several local clubs. His excess equipment was regularly donated to MARA. He made gifts to the club that allowed for the purchase of HTs for new hams and to help replace aging exterior doors to their clubhouse. He made significant donations to the ARRL joining the Maxim Society, the Founder Class, and giving to the Spectrum Defense Fund, and the Second Century Campaign.

From listening and observing his operations for hours, I can tell you he could pick out call letters from the heaviest QRM and weakest of signals. I'd watch as he'd bang out six contacts a minute when conditions were good for hours and peak at seven per minute at times. As he'd go on trips, I'd want to work him. My home equipment paled in comparison to his 4 elements on 20 and linear amp, so, I'd go to my folks to work him. I'd respond to his

QRZ with "W8KKF" and something that

Harry Flasher—AC8G (cont.)

In his professional life, he was a Certified Public Accountant (CPA). He applied the attention to detail and planning he learned as a CPA to the hobby. This also led to a funny story: On one DXpedition, a dozen of us were enjoying a post-contest meal at a restaurant. Although we had asked the waiter for individual bills, he returned with one large bill followed by several minutes of discussion to determine how to properly split the bill. One ham said, “we really need a CPA for this!” My mom chimed in, “my husband is one” to which he replied, “I am not.” She was dumbfounded as he explained that since he decided to quit doing taxes, he hadn’t wanted to spend the \$50 to remain certified. Always the accountant trying to save money!


Because he was so passionate about his hobby, he always tried to improve his operating skills through careful study and practice. He spent hours working on antennas. Most importantly, he shared his impressive skills with the world. He made sure the family enjoyed ham radio with him as he planned and executed public service, contests, and DXpeditions. I knew, obviously, that he did a great deal of work in amateur radio, but I never looked at his career in total until compiling this document. I’m absolutely sure there are things he did that I can’t find paperwork on. He was never chasing recognition, rather he was just doing what he loved.



Dad and Ron Hesselbrock [SK] (WA8LOW) enjoying a local merchant’s sign on one of their many trips together.

I am forever blessed to be the son of this most impressive man. He was a skilled and committed amateur radio operator and I am so proud to hold his old call letters, W8KKF!

Data compiled by
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Dayton, OH 45449



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*Harry Flasher—AC8G Results (cont.)***CONTEST RECORD (abbreviations used at end of listing)****ARRL 10 METER CONTEST**

Year	Category	Place	Call Used
1981	SO PO HP Ohio Section	5th Place Ohio Section	W8KKF
1982	SO PO HP Ohio Section	4th Place Ohio Section	W8KKF
1983	SO PO HP Ohio Section	2nd Place Ohio Section	W8KKF
1984	SO PO HP Ohio Section	2nd Place Ohio Section	W8KKF
1987	SO PO HP Ohio Section	4th Place Ohio Section	W8KKF
1988	SO PO Ohio Section	1st Place Ohio Section	W8KKF
1991	SO PO HP Ohio Section	3rd Place Ohio Section	W8KKF
1992	SO PO HP Ohio Section	1st Place Ohio Section	W8KKF
1993	SO PO HP Ohio Section	1st Place Ohio Section	W8KKF
1994	SO PO HP Ohio Section	4th Place Ohio Section	W8KKF
1995	SO PO HP Ohio Section	1st Place Ohio Section	W8KKF
1996	SO PO HP Ohio Section	1st Place Ohio Section	W8KKF
1997	SO PO HP Ohio Section	2nd Place Ohio Section	W8KKF
1998	SO PO HP Grenada	1st Place Grenada #7 World	J37K
1999	MO ST HP Ohio Section	3rd Place Ohio Section	W8KKF
2000	SO PO HP Grenada	1st Place Grenada #9 World	J37K
2001	SO PO HP Costa Rica	1st Place Costa Rica #9 World	T15N (AC8G)
2002	SO PO HP Ohio Section	1st Place Grenada #3 N.A.	W8KKF
2003	SO PO HP Grenada	1st Costa Rica 3rd N.A. 5th DX	T15A
2005	SO PO HP Ohio Section	1st Place Ohio Section	AC8G
2008	SO PO HP Ohio Section	2nd Place Ohio Section	AC8G
2009	SO PO HP Ohio Section	1st Place Ohio Section	AC8G
2010	MO ST HP Ohio Section	3rd Place Ohio Section	AC8G
2012	MO ST HP Ohio Section	3rd Place Ohio Section	AC8G
2013	MO ST HP Ohio Section	3rd Place Ohio Section	AC8G
2014	SO U PO HP Ohio Section	2nd Place Ohio Section	AC8G
2015	SO U PO HP Ohio Section	1st Place Ohio Section #9 US	AC8G
2016	SO U PO HP Ohio Section	3rd Place Ohio Section	AC8G

*Harry Flasher—AC8G Results (cont.)***ARRL DX CONTEST**

Year	Category	Place	Call Used
1984	SO 15M Phone Ohio	1st Place Ohio Section	W8KKF
1986	Phone Bahamas	1st Place Bahamas	W8KKF/C6A
1993	SO Phone World Grenada	1st Place Grenada #7 World	J37K
1995	SO HP Phone Grenada	1st Place Grenada #3 N. A. #6 World	J37K
1996	SO HP Phone Grenada	1st Place Grenada #5 N. A. #8 World	J37K
1997	SO LLP Louisiana	3rd Place Louisiana Sec #10 Delta Div	W8KKF
1998	MO 2T Phone Grenada	1st Place Grenada #2 N. A. #3 World	J38G
2001	MO MT	1st Place Anguilla 3rd N. A. 3rd DX	VP2EK
2006	SO 15M Phone Grenada	1st Place Grenada #2 N. A. #4 DX	J37K
2010	SO 15M Phone Grenada	1st Place Grenada #2 N. A.	J37K
2011	SO U HP Ohio	3rd Place Ohio Section	AC8G
2012	SO U HP Ohio	10th Place Ohio Section	AC8G
2013	SO 15M Phone Ohio	2nd Place Ohio Section	AC8G
2017	SO U HP Ohio	6th Place Ohio Section	AC8G
2018	SO U HP Ohio	5th Place Ohio Section	AC8G
2020	SO U HP Ohio	8th Place Ohio Section	AC8G

ARRL VHF SWEEPSTAKES CLUB COMPETITION

Year	Category	Place	Call Used
1970	DARA	Ohio Section WINNER	W8KKF
1977	DARA	TOP SCORE	W8KKF

ARRL VHF SWEEPSTAKES CONTEST

Year	Category	Place	Call Used
1964	DARA Club	WINNER CLUB AWARD	W8KKF
1970	DARA Club	WINNER CLUB AWARD	W8KKF

*Harry Flasher—AC8G Results (cont.)***CQ WORLDWIDE 160 METER CONTEST**

Year	Category	Place	Call Used
1984	SO HP	#105	W8KKF
1993	SO HP	#148	W8KKF
1995	SO HP	#106	W8KKF
2007	SO HP	#2 Ohio #8 Ohio #55 US #129 World	AC8G
2009	SO HP	#2 Ohio #5 Ohio #64 US #139 World	AC8G
2013	SO HP	#4 Ohio #8 8th Call #55 US #129 World	AC8G

CQ WORLDWIDE DX CONTEST

Year	Category	Place	Call Used
1981	SO A HP AB Ohio	#7 US 8th call area	W8KKF
1982	MO MT SSB Canada (N. Quebec)	#1 Canada #20 North America	W8OK/VE2
1983	MO MT SSB Canada (N. Quebec)	#1 Canada	W8BI/VE2
1984	MO MT SSB Antigua and Barbuda	#6 world #5 North America	V2ARS
1985	MO MT SSB Galapagos Island	#1 Galapagos #1 S.A. #1 World	HC8X
1986	SO AB SSB Bahamas	#1 Bahamas #47 N.A.	W8KKF/C6A
1987	MO MT SSB Bahamas	#1 Bahamas #13 N.A. #31 World	W8 KKF/C6A
1988	MO MT SSB Grenada	#1 Grenada #29 N.A. #49 World	J3/W8KKF
1989	MO MT SSB Grenada	#1 Grenada #9 N.A. #16 World	J37DX
1990	MO MT SSB Grenada	#1 Grenada #7 N.A. #15 World	J37DX
1991	MO MT SSB St. Vincent	#1 St. Vincent #3 N.A #9 World	J80D
1992	SO AB SSB St. Vincent	#1 St. Vincent #34 N.A. #80	J80D
1993	SO AB SSB Granada	#1 Grenada #13 N.A. #35 World	J37K
1994	MO MT SSB Grenada	#1 Grenada #10 N.A. #30 World	J3A
1995	ST SSB Grenada	#1 Grenada #93 N.A. #26 World	J3A
1996	MO MT SSB Grenada	#1 Grenada #3 N.A. #8 World	J3A
1997	MO MT SSB Grenada	#1 Grenada #6 N. A. #12 World	J3A
1998	MO MT SSB Grenada	#1 Grenada #2 N.A. #7 World	J3A
1999	MO ST SSB Curaçao	#1 Curacao #1 S.A.#14 World	PJ2C
2000	MO MT SSB Anguilla	#1 Anguilla#28 N.A. #55 World	VP2EK
2002	MO MT SSB Costa Rica	#1 Costa Rica #2 N.A. #7 World	T15N
2003	MO MT SSB Costa Rica	#1 Costa Rica #3 N.A. #9 World	T15N

*Harry Flasher—AC8G Results (cont.)***CQ WORLDWIDE DX CONTEST**

Year	Category	Place	Call Used
2005	MO MT SSB Grenada	#1 Grenada #9 N.A. #18 World	J3A
2006	MO MT SSB Grenada	#1 Grenada #3 N.A. #9 World	J3A
2007	MO MT SSB Grenada	#1 Grenada #8 N.A. #17 World	J3A
2009	HP SSB SOP All-Band Grenada	#1 Grenada #74 N.A. #241 World	J37K
2010	LP SSB SO A 10M Grenada	#1 Grenada #2 N.A. #20 World	J37K
2011	SO A HP AB Ohio	#8 US 8th #121 N.A. #226 World	AC8G
2012	SO A HP AB Ohio	#6 US 8th #93 N.A. #179 World	AC8G
2013	SO A HP AB Ohio	#14 US 8th #232 N.A. #435 World	AC8G
2014	MO MT SSB Grenada	#1 Grenada #23 N.A. #49 World	J3A
2015	SO A HP 10M Ohio	#1 US 8th #5 US #7 N.A. #68 World	AC8G
2016	SO A HP AB Ohio	#7 US 8th #110 N.A. #230 World	AC8G
2017	SO A HP 20M Ohio	#2 US 8th #10 US #12 World	AC8G
2018	SO A HP AB Ohio	#15 US 8th #253 N.A. #448 World	AC8G
2019	SO A HP AB Ohio	#15 US 8th Call area	AC8G
2021	SO A HP AB Ohio	#35 US 8th Call area	AC8G

CQ WORLDWIDE SB & CW DX CONTEST

Year	Category	Place	Call Used
1988	4 Band	4 Band (New World Record)	P40V

CQ WORLDWIDE VHF Contest

Year	Category	Place	Call Used
1961	50Mc Ohio	CERTIFICATE OF MERIT	W8KKF
1964	General	WINNER #5 Ohio	W8KKF
1965	50Mc Ohio	2nd SUMMER COMPETITION	W8KKF
2012	SO 6M	#5 8th Call area #68 US	AC8G

*Harry Flasher—AC8G Results (cont.)***CQ WORLDWIDE WPX CONTEST**

Year	Category	Place	Call Used
1985	SO AB US Virgin Islands	#120	W8KKF/V2A
1988	SO AB Grenada	#1 Grenada	W8KKF/WP2
1989	SO AB US Virgin Islands	#1 U.S. Virgin Islands	W8KKF/KP2
1990	SO AB Grenada	#1 Grenada	J37DX
1991	SO AB Grenada	#1 Grenada	J37K
1994	SO AB Grenada	#1 Grenada	J37DX
1999	MO MT	17th	WO8CC
2003	SO HP 10M Grenada	#11 World	J37K
2011	SO A HP Ohio	#4 US 8th Call area	AC8G
2016	SO A HP Ohio	#3 US 8th Call area	AC8G
2020	SO A HP 20M Ohio	#1 US 8th Call area #14 N.A.	AC8G

CQ WORLDWIDE WPX-SSB CONTEST

Year	Category	Place	Call Used
1985	SO AB Antigua	#1 Antigua	W8KKF/V2A

DAYTON AMATEUR RADIO ASSOCIATION VHF CONTEST

Year	Category	Place	Call Used
1961	Ohio Section	1961 WINNER	W8KKF

International Amateur Radio Union (IARU) RADIOSPORT HF WORLD CHAMPIONSHIP

Year	Category	Place	Call Used
1981	PO Ohio	FIRST PLACE	W8KKF
1982	PO Ohio	FIRST PLACE	W8KKF
1983	PO Ohio	FIRST PLACE	W8KKF
1984	PO Ohio	FIRST PLACE	W8KKF
1985	PO Ohio	FIRST PLACE	W8KKF
1986	SO PO Missouri	FIRST PLACE	W8KKF/0

Harry Flasher—AC8G Results (cont.)

International Amateur Radio Union (IARU) RADIOSPORT HF WORLD CHAMPIONSHIP (continued)

Year	Category	Place	Call Used
1991	PO Ohio	SECOND PLACE	W8KKF
1992	PO US & Canada	10th Place	W8KKF
1995	SO PO Ohio	CERTIFICATE FOR OPERATING ACHIEVEMENT	W8KKF
1996	SO PO Ohio	2nd Place Ohio	AC8G
1997	SO PO Ohio	FIRST PLACE	W8KKF
2000	IARU HQ Zone 11	Winner Zone 11	J39HQ
2002	SP PO HP Ohio	3rd Place Ohio Section	W8KKF
2005	SP PO HP Ohio	FIRST PLACE	AC8G
2006	SP PO HP Ohio	2nd Place Ohio Section	AC8G
2011	SP PO HP Ohio	1st Ohio #6 Zone 8 #10 W/VE	AC8G
2017	SP PO HP Ohio	2nd Ohio #5 Zone 8 #9 W/VE	AC8G

SWODXA DX CONTEST

Year	Category	Place	Call Used
2012	Ohio	FIRST PLACE	AC8G
2013	Ohio	FIRST PLACE	AC8G
2017	Ohio	SECOND PLACE	AC8G

WAEDC DEUTSCHER ARC EUROPEAN DX-CONTEST

Year	Category	Place	Call Used
1999	Grenada	1st Place Grenada	J37K
2000	SSB SO Ohio	#1 US Call Area 8	AC8G
2004	SSB SO Ohio	#1 US Call Area 8	AC8G

Harry Flasher—AC8G Results (cont.)

Abbreviations:

2T	Two Transmitters
A	Assisted
AB	All Bands
HP	High Power
LP	Low Power
MO	Multi operator
MT	Multiple Transmitters
N.A.	North America
PO	Phone Only
S.A.	South America
SO	Single Operator
SSB	Single Side Band (Phone)
ST	Single Transmitter
U	Unlimited



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SouthWest Ohio DX Association (SWODXA)

Club Fact Sheet

Who We Are: *SWODXA* is comprised of active DX'ers and contesters with a deep passion for all aspects of Amateur Radio. We welcome everyone who is interested in joining our club to please contact us. *SWODXA* members are active in all facets of DX and Contesting. We also travel to, and fund various DXpeditions all over the world. *SWODXA* sponsors the annual DX Dinner held on the Friday evening of Hamvention weekend in Dayton, Ohio. In addition, *SWODXA* members moderate the Hamvention DX Forum and host the *W8DXCC DX Convention*. *SWODXA* is proud sponsor of the prestigious *DXpedition of the Year Award*.

DX Donation Policy: The policy supports major DXpeditions that meet our requirements for financial sponsorship. Details are available on the website at: <https://www.swodxa.org/dxgrant-application/> and elsewhere in this newsletter

Club History: The Southwest Ohio DX Association (SWODXA) is one of the country's premier amateur radio clubs. Though loosely formed in mid-1977, the club had its first formal organizational meeting in August of 1981 where Frank Schwob, W8OK (sk), was elected our first President. While organized primarily as a DX club, SWODXA members are active in all aspects of our hobby.

Requirements for Membership: We welcome all hams who have an interest in DXing. It doesn't matter whether you're a newcomer, or an old-timer to DXing; everyone is welcome! Visit <http://swodxa.org/member.htm>

Meetings: The club meets on the second Thursday of each month at Hunter Pizzeria in Franklin, OH, and virtually via ZOOM. Members gather early in the private room for dinner and then a short business agenda at 6:30 PM, followed by a program. If you enjoy a night out on the town with friends, you'll enjoy this get together. Meeting attendance is NOT a requirement for membership.

Club Officers: Four presiding officers and the past president (or past VP) make up the Board of Directors. The current roster of officers are: Past President Tom Inglin, NR8Z, President Bill Salyers, AJ8B; Vice President Kevin Jones, W8KJ; Secretary Mindi Jones, KC8CKW, and Treasurer Mike Suhar, W8RKO.

Website: We maintain websites at www.swodxa.org and www.swodxaevents.org managed by Bill, AJ8B. These sites provide information about a variety of subjects related to the club and DXing.

SouthWest Ohio DX Association (SWODXA)

DX Donation Policy

The mission of SWODXA is to support DXing and major DXpeditions by providing funding. A funding request from the organizers of a planned DXpedition should be directed to the DX committee by filling out an online funding request.

(<https://www.swodxa.org/dx-grant-application/>)

The DX Grant committee will determine how well the DXpedition plans meet key considerations (see below). If the DX Grant committee recommends supporting the DXpedition in question, a recommended funding amount is determined based on the criteria below. The chairman of the committee will make a recommendation at the general meeting on the donation.

Factors Affecting a DXpedition Funding Request Approval

DXpedition destination	Website with logos of club sponsors
Ranking on the Clublog Most Wanted Survey	QSLs with logos of club sponsors
Online logs and pilot stations	Logistics and transportation costs
Number of operators and their credentials	Number of stations on the air
LoTW log submissions	Bands, modes and duration of operation

H40GC	H44GC	ZL9HR	XX9D	HK0NA	FT4TA
KH1/KH7Z	EP2A	FT5ZM	C21GC	VK9WA	NH8S
K4M	CY9C	VK9MA	PT0S	FT4JA	YJ0X
6O6O	VP6D	TO4E	XR0ZR	VP8STI	VP8SGI
W1AW/KH8	K1N	3D2C	VK0EK	S21ZBB	E30FB
ST0RY	TI9/3Z9DX	VK9MT	K5P	9U4M	TX3X
VU7AB	3Y0Z	3C0L	TX7EU	CE0Z	3C1L
TI9A	3D2CR	3B7A	K9W	VU7RI	6O7O
C21WW	CE0Z	T30GC	T30L	D68CCC	W8KKF/WP5
K5D	3Y0J	T33A	3Y0J	CY9C	