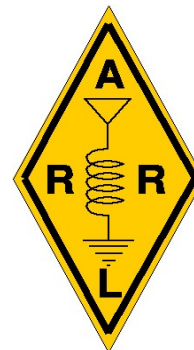


January-February-March 2019

"Ohio's First DXCC Field Checking Club"



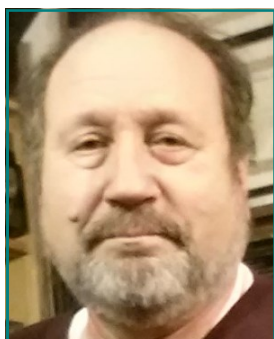
# The NODXA RAG



## Fireside Chat With KB8NW

Fellow DXers,

I was sad and concerned to learn at the January meeting that our club membership has dropped to 32 members. I do believe this is the lowest it has been since I became president of the club in 1990.



It was at one time above 100, somewhere (I believe) between 130-150 range. I understand that in the past the membership has always dropped when the sun-spot cycle was at its lowest, and we had recently some "Silent Keys", but this to me is alarming and very low. On the club's mailing list/reflector we are showing 49 members. I have not had time to compare that list with the membership list that Mary, N8DMM, passed out to the members at the April meeting.

In any event, it time to recruit some new and former members to the club, especially some younger ones. Our current treasury is healthy due to some "Silent Key" donations, but it will not last. Just in 2019 alone (as of April), NODXA has donated to 5 DXpeditions (a total of just under \$1000).

This total, so far, does not include funds toward the NODXA Hospitality Suite at the Dayton HamVention and the upcoming ARRL Field Day event. So you can see that our treasury can become unhealthy quickly. PLEASE help encourage other DXers/Contesters to join NODXA.

Let's talk about DX. As mentioned above, NODXA has donated funds to 5 DXpeditions this year, and 3 of them have already taken place (T31EU, XR0ZRC and XX9D). The other two are "VP6R Pitcairn Island" (slated to take place between October 18th and November 1st) and "South Orkney Islands" (slated to take place in Feb/Mar, 2020). One big disappointment for 2019 is a postponement of another Bouvet Island DXpedition.

The 3Y0I team was just 70 nautical miles off Bouvet Island, and the ship was "hit by a series of 11+ meters (36+ ft) tall waves + wind exceeding 83 knots/h (approx. 160 km/h). The fierce oceanic forces swept past the upper deck, taking one of the radars, including VSAT, VHF and HF marine antennas off the mast and throwing them all overboard. The hit was so hard the vessel tilted as much as 45°. The captain had to declare the ship unsafe and had to sail back to South Africa. The 3Y0I team stated that they will try again as soon as possible.

Just a reminder! The Day-Xenia HamVention is just around the corner, between May 17-19th. NODXA will have their Hospitality Suite available and open at the

"The Mission of the Northern Ohio DX Association is to promote and support Amateur Radio and the DX Community around the world."

Crown Plaza for three nights (Thursday, Friday and Saturday). Come and visit with DXers/Contests from around the world.

As always, I hope to see you in the coming weeks/months, possibly at a hamfest, or NODXA's general membership meetings every first Monday of the month (unless it is a holiday -- it will be the second Monday).

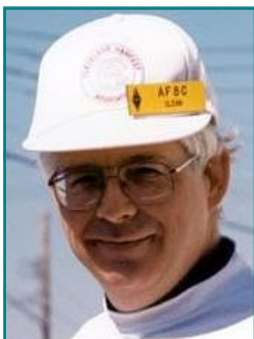
As a reminder, if you have a topic to discuss about DXing or contesting, bring it up at the meeting. Also, if you would like to put on a program of some interest for the club in the coming months, let us know so we can schedule you in for a meeting. We are always looking for a program.

73 and Good DX, de Tedd KB8NW

P.S. Dues are due for the 2019-2020 fiscal year.

## Minutes of the December 3rd, 2018 NODXA Meeting

Vice President Dennis, K8LBT, opened the meeting at 7:30 p.m., with 17 members and guests present. After a round of introductions and the Pledge of Allegiance, the secretary read the minutes for the meeting for November 5, 2018. Then Bruce, N8DJX, moved and Gary, NI8Z, seconded that the minutes be approved and the motion passed. Next the Treasurer Mary, N8DMM, reported the treasury balance was \$Ka-Ching! Then Bruce, N8DJX, moved and Rick, K8ZH, seconded a motion for the treasurer's report to be approved, and it was approved by the vote. The repeater was reported as OK. Editor Dave, WD8IOU, reported that the next newsletter is in progress. He always needs articles and photographs for the newsletter.



### Old/New Business:

The donations voted in the previous meeting, to XX9D and T31EU, were made. XX9D acknowledged our donation immediately. Because the T31EU team was still busy with A35EU, no acknowledgement occurred at the time.

Field Day 2018 results are out. Our club was number 6 in 2A overall, number 51 overall, number 7 in Great Lakes Division, number 1 in 2A Great Lakes Division and also in Ohio, and number 4 in all categories for Ohio.

Comments on the Dalton luncheon were requested. There were many likes. The club has one new donation request, that from EP6RRC, which is now over. We owe them a decision. Dave, WD8IOU, suggested that any action on that possible donation be tabled. No one wanted to make a motion on that.

A VP6D insider newsletter was passed around to the group. Jim, K8MR, said that final results from the Ohio QSO Party are not out yet, but OM2VL is the likely DX winner. Jim is looking for the club to sponsor the 2019 DX plaque. A motion to sponsor that plaque in an amount not to exceed \$100 was made by Bruce, N8DJX, and seconded by Gary, NI8Z. That motion passed. Jim announced that K3LR is the likely winner in the U.S. On a lighter note, Gary, NI8Z, has a 77<sup>th</sup> birthday on Friday December 7.

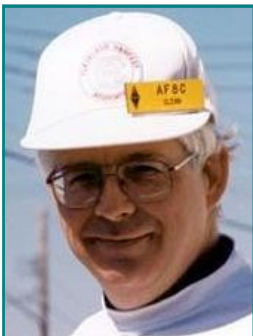
### Wrap-up:

It was moved and seconded that the meeting be closed, and the motion was passed on the vote. The next meeting will occur on January 7, 2019. The 50/50 raffle result drawing resulted in Joe, N8QXC, winning his half of \$30.00. Joe donated his portion back to the club. The meeting closed at 7:49 p.m.

Respectfully, Glenn, AF8C, Secretary

## Minutes of the January 7th, 2019 NODXA Meeting

Tedd, KB8NW, opened the meeting at 7:30 p.m. on a cold night with 14 members and guests present. After a round of introductions and the Pledge of Allegiance, the secretary read the minutes for the meeting for December 3, 2018. Then Bruce, N8DJX, moved and Dave, WD8IOU, seconded that the minutes be approved and the motion passed.



Next our Treasurer Mary, N8DMM, reported the treasury balance was \$Ka-Ching! Then Wayne, K8FF, moved and Bruce, N8DJX, seconded a motion for the treasurer's report to be approved, and it was approved by the vote. We have 32 paid members with 6 people also paid ahead for 2020. The repeater was reported as OK. Editor Dave, WD8IOU, reported that the next newsletter is in progress. He always needs articles and photographs for the newsletter.

### Old/New Business:

Tedd received an email from the president of INDEXA discussing how INDEXA funded certain activities in 2018 and what they are planning for 2019. NODXA is a member of INDEXA. Another email Tedd received was from the VP6D group describing that group is working on the design for their QSL card and that NODXA's logo and a link for our newsletter will be on the card. In today's OPDX 1397.1 Tedd described the status of 3YOZ donations and refunding. There will be four options. Bruce, N8DJX, moved and Dennis, K8LBT, seconded that we pick Option 1, which is that we will ask for the refund to be sent back to us. The motion passed on the vote.

Then we heard Tedd describe the story from the new 3YO team, which is that they will accept donations with no strings attached. On another tack, Tedd has received email about the W8DXCC Convention which is to be held in the Cincinnati area on June 15, with Tim Duffy, K3LR, as keynote speaker. Tedd noted that DX Engineering will have a winter sale day on Saturday, January 19. Mail from the TUSCO Hamfest mail announced that their hamfest will be on January 27. Looking ahead, the 2019 ARRL Field Day will be on June 22-23.

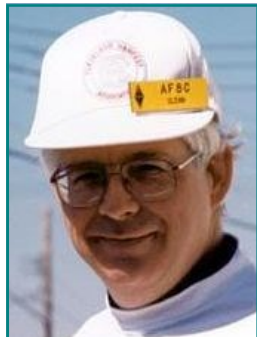
### Wrap-up:

Denny, WB8K, moved and Bruce, N8DJX, seconded that the meeting be closed, and the motion was passed on the vote. The next meeting will occur on February 4, 2019. The 50/50 raffle result was skipped tonight. The meeting closed at 8:07 p.m.

Respectfully, Glenn, AF8C, Secretary

## Minutes of the February 4th, 2019 NODXA Meeting

Tedd, KB8NW, opened the meeting at 7:30 p.m. on a cold night with 14 members and guests present. After a round of introductions and the Pledge of Allegiance, the secretary read the minutes for the meeting for January 7, 2019. Then Gary, NI8Z, moved and Dennis, K8LBT,



seconded that the minutes be approved and the motion passed. Next our Treasurer Mary, N8DMM, reported the treasury balance was \$Ka-Ching! Then Bruce, N8DJX, moved and Gary, NI8Z, seconded a motion for the treasurer's report to be approved, and it was approved by the vote. The repeater was reported as OK. No report on the newsletter was available tonight because our editor was not at the meeting.

### Old/New Business:

Tedd reported that the VP6D cards are very nice, as a 6 page QSL. We re-

ceived the 3Y0Z Option 1 refund amounting to \$360. Mary has that now. The refund came with a nice thank you letter.

Two members went to the DX Engineering Saturday event in spite of the weather. Numerous attendees and staff were present. Mary has fleamarket spaces and tickets reserved already at the May Dayton Hamvention. The Hamvention now uses a third party reservation system. The 2019 ARRL National Convention will be on May 17 to May 19 at the Hamvention.

Nelson, K8DJC, described that folks should look into HAMESTATE.COM where for \$15.00 per month (or \$165/year, discounted to \$148.00 for veterans) covers a contract where they will come and remove all your amateur radio equipment and antennas and towers when you become a Silent Key. Their commission is 30% of the total sales income after estate equipment is sold. Pete, N8TR, said that a second Web site can be found to do that same thing.

On DX, Tedd said that the 3Y0I group has nothing to report. Then Tedd reported on his hacked server losses and he said he has a new ISP. One DXpedition has sent a donation request. The call sign XROZRC will be for Robinson Crusoe Island at Juan Fernandez, which is number 68 on the most wanted lists. They will have four stations on the air for over two weeks, including 160m, during March 11-27. They will not do RTTY but will operate FT8 for digital credit. Bruce, N8DJX, moved and Pete, N8TR, seconded that we donate \$100 to that operation. The motion passed on the vote.

The Mansfield Hamfest will occur on February 17, opening at 7 a.m. Check-ins will be on 146.94 using a PL of 71.9 Hz. The spring luncheon will be on March 20 or 21.

Pete, N8TR, said that Don, K8MFO, worked over 1000 QSOs in the CQ 160m CW contest. Don's first contest was in 1960 when he worked 13 stations. One of those operators he worked was a member of this club, W8QWI, Al Altomari, a DXer from Lorain and card checker. Pete discussed the email report from Glenn, AF8C, regarding the first amateur radio operators in Ohio in 1909 well before regional numbers were affixed to call signs by federal edict in 1913 as the number of hobbyists expanded dramatically.

Next month will be nomination of officers, with election occurring in April. Pete, N8TR, recommends backups for your computer be on media that is removed in case you computer gets hacked. George, K8KR, discussed how ON4UN QSLs everyone and that ON4UN has a collection of 120,000 cards.

#### Wrap-up:

Bruce, N8DJX, moved and Denny, WB8K, seconded that the meeting be closed, and the motion was passed on the vote. The next meeting will occur on March 4, 2019. The 50/50 raffle result was a split of \$26.00 won by Denny, WB8K. Denny donated his half back to the club. The meeting closed at 8:07 p.m.

Respectfully, Glenn, AF8C, Secretary

## Field Day 2019 by David Autry, WD8IOU

It's Field Day time again! June 22 and 23 to be exact. As usual, we will do a low-key, just for fun, operation. As a result, we will not have a GOTA station this year because of all the extra work required to set it up; the club will participate in the 2A class using two stations: SSB, and CW/RTTY. We also have a 6 meter rig for both SBB and CW.

The NODXA site is the same as last year, the Mount Augustine Training Center located on 5232 Broadview Road in Richfield. *A map to the Field Day site is on the next page.*

Everybody is encouraged to attend this 24-hour marathon, and, most of all, to operate! We especially need CW operators to keep that station running for the full 24 hours.

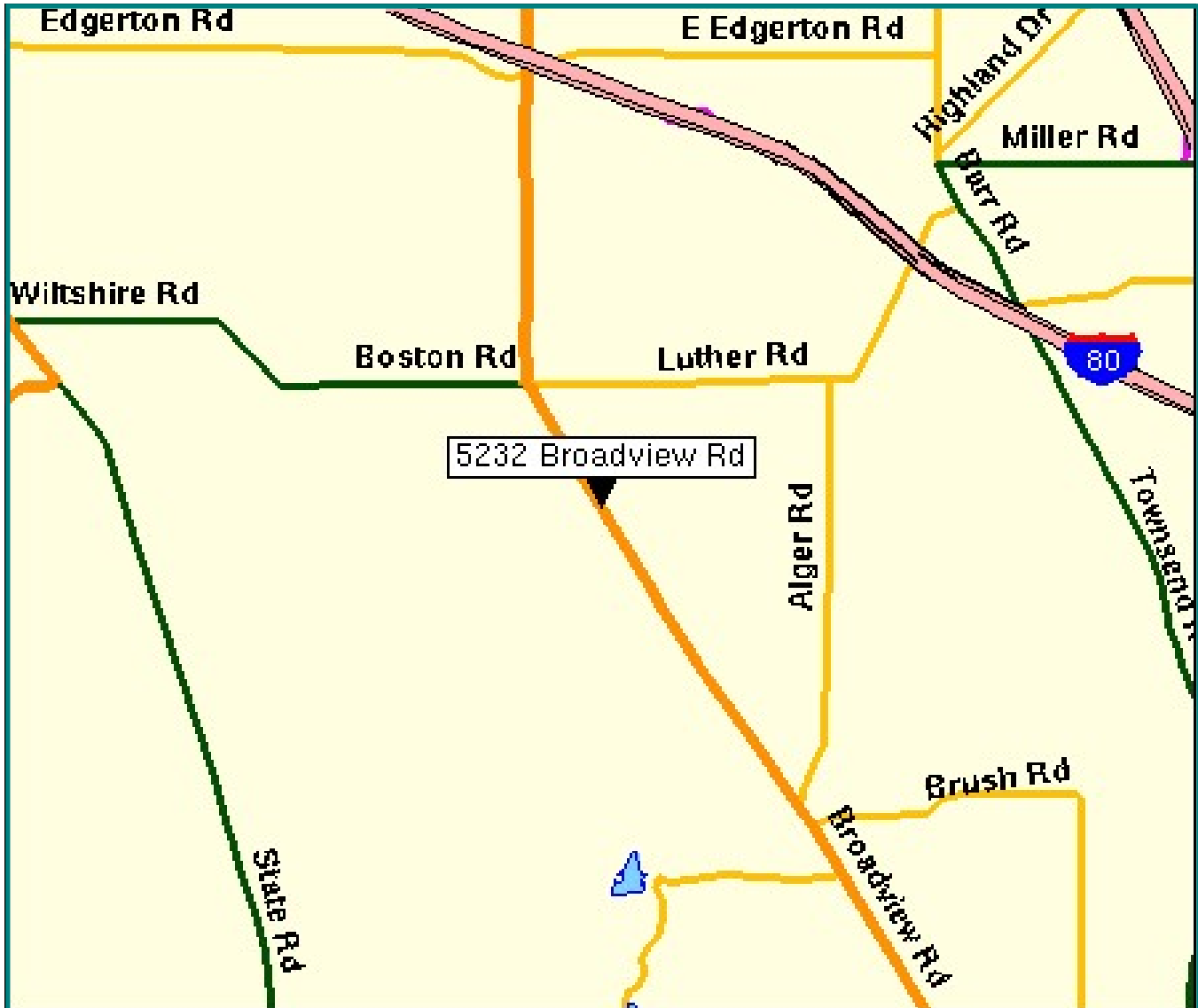
Field Day is a great way to introduce young people to ham radio. So bring your grandkids, nephews/nieces, etc.

Pete, N8TR, is planning an early setup of tents and antennas Friday evening around 6 PM. Everybody is encourage to stop by and help out; this will decrease the amount of work required on Saturday morning.

The contest starts at 2 PM Saturday and ends at 2 PM Sunday. Operators are real scarce during the "3rd shift" (12 AM to 8 PM) so it would be a great help for our club's score if we could have a couple more operators during those hours. The rig in the CW tent will be an Elecraft K3 so here is your chance to operate a top-of-the-line radio!

The club has allocated some money for food and drink so there should be plenty to eat. But we will need some cooks so, even if you don't want to operate, stop on out and flip some burgers!

Remember to bring the bug spray, folding chairs, sun screen, and 807's! See you there!



Please reserve and pay for your  
**“2019 Hamvention”** ride to Xenia, OH  
**Bus Trip ASAP.**

**Saturday May 18, 2019 CARS** is  
 again sponsoring a Bus trip to the  
**“2019 Hamvention”** 3<sup>rd</sup> time now at  
 the Green County Fairgrounds,  
 Xenia, OH.



*Every amateur radio operator in the world probably dreams about going to the Hamvention (formerly Dayton Hamvention) at least once. Please join us in 2019, it is an incredible event, 3<sup>rd</sup> year in this Venue and offers something for everyone.*

The Bus trip will cost \$50.00 dollars per person, we will not stop for breakfast on the way down, but there may be a fast food stop on the way home. You are responsible for both your food and Hamvention tickets. Go to <http://www.hamvention.org/tickets.php> to order your tickets. **The Bus is wheel-chair accessible**

***Stop 1: The 56 passenger bus will leave promptly at 5:00 am from the Kmart parking lot at the intersection of Engle and Bagley Roads, in Middleburg Heights, Engle Road is 1/4 mile west of I-71, Kmart is behind the Gas station. Vehicles will be safe, there is security.***

***Stop 2: The bus will also pickup riders at I-71 & Rt 303 at the SE corner of the Kmart parking lot and will depart for Xenia at approximately 5:30 am.***

***When ordering tickets please tell us which stop you will be at, plus we need your email info, name, call and phone number.***

**Bus tickets must be purchased and paid for in advance.**

***If you have any questions please see Toby WT8O at a CARS meeting or call him at 440-525-6109. Checks must be made out to CARS and mailed to: Toby Kolman, 5789 East Law Rd., Valley City, OH 44280 attn. Xenia bus or email: wt8o@att.net***

**73, Toby, WT8O**

## Nazis pressed ham radio hobbyists to serve the Third Reich - but surviving came at a price. by Bruce Campbell, Associate Professor of German Studies, College of William & Mary. Originally published in "The Conversation" (<https://theconversation.com>)

When people have free and unfettered choices of activities, they both entertain and express themselves through their pastimes - whether stamp or coin collecting, scrapbooking, gardening or tinkering with electronic gadgets. But what happens when those free spirits - particularly those whose hobbies have taught them specialized technical skills - suddenly find themselves living in a dictatorship?

As a historian of national socialism, I note that my newest research into German radio hobbyists has found a cautionary tale. Authoritarian governments or movements often subvert and take over civic organizations - including seemingly unimportant hobby groups - as part of seizing power. My work suggests that people involved in technological hobbies, such as radio, may be able to retain a bit more personal freedom than those in less strategically important ones, such as singing or sports. But that liberty can come at the cost of complicity.

### Radio and the Nazis

In the "Jazz Age" of the 1920s, people were fascinated with new technologies, including airplanes, motor vehicles and radios. Large industries grew from those fascinations, of course, but so did hobbies and groups of hobbyists.

In Germany - and other countries - radio hobby clubs thrived. Several hundred thousand Germans joined these groups, in part because commercial radios were very expensive, and clubs helped people build their own much more cheaply. Once built, they also tinkered with the radios' insides, partly just because they could and partly to improve reception, particularly of foreign stations, which often offered more light entertainment than state-controlled German broadcasting. (The clubs also threw great parties.)



Joseph Goebbels, left, shows the 'people's receiver' to Adolf Hitler at a radio exhibition in 1933

In 1933, the Nazis took power in Germany. They began a comprehensive and often violent process of remaking all of German society to serve the Nazi Party. Groups as diverse as choirs, political parties, sports clubs and chambers of commerce were shut down outright or taken over and purged of Jews, so-

cialists, outspoken democrats and other people the Nazis deemed "undesirables."

The groups that survived had to support the new regime. Radio hobbyists were particularly exposed because their skills involved building communications equipment.

The Nazis were especially interested in ham radio operators, who were part of a worldwide community of hobbyists who did much more than just listen to entertainment or news broadcast by others. They transmitted and received messages on their own. In Germany, people couldn't buy ready-made radio transmitters and other technical equipment that were usable on the frequencies of interest to amateurs. Ham operators had to build their own equipment, which went far beyond the simple broadcast-band receivers most hobbyists built. They also had to - as is still true today - pass a fairly complicated technical exam to earn a transmitting license.

This meant that hams, whether or not they were electrical engineers or other types of scientists by profession, accumulated a fairly high degree of scientific and technical knowledge in electrical engineering and radio-frequency reception and transmission. They also got a lot of practical experience in using radio equipment, which only professional radio operators could match.

## Ham radio's survival

Joseph Goebbels, the Nazi minister of propaganda and popular enlightenment, understood the power that radio could have, both to disseminate Nazi propaganda and to connect groups who were resisting the Nazi takeover. So he moved quickly to take control of not only commercial broadcast radio stations but also the radio clubs and their members. Those clubs that wanted only to passively listen to broadcast radio and tinker a little bit were shut down.

The hams, who wanted to transmit their own information, found themselves in a difficult position. The Nazis knew that German hams had a history of illegal transmission without licenses and were likely to have unsupervised radio contacts with foreigners, even those from the Soviet Union or France, Germany's former enemy in World War I.

Though there were only a few thousand licensed German hams, their technical expertise was too valuable to the regime to be completely dismissed. In fact, German ham radio operators and their clubs found themselves with several powerful Nazi supporters - including in the German military - who protected them from being shut down as other hobby groups had been. The government even doubled the number of available ham transmission licenses.

Hams could continue their hobby, but only if they collaborated, at times in ways antithetical to the hobby's previous culture.

## What the Nazis wanted from amateur radio

In the spring of 1933, as the Nazis consolidated power, Goebbels took control of the hams' national organization, called the "German Amateur Transmission and Reception Service," known by its German initials as the DASD. While ostensibly a private organization, it was forced to let the Propaganda Ministry choose its president, in consultation with the German military, and give the government veto power over other club leaders.

One of Goebbels's hopes was that German ham operators could use their connections with ham radio operators in other countries to spread Nazi propaganda around the world. That didn't prove very valuable: Most radio exchanges with foreign amateurs focused on purely technical information. In any case, the fact that many German hams could be heard on the airways was never taken by outsiders as proof of how wonderful life under national socialism was claimed to be.

German hams never bothered to tell the Propaganda Ministry how silly this international propaganda idea actually was and dutifully reported large numbers of foreign contacts.



## Rebuilding the German military

More importantly, though, German amateur radio hobbyists were a big boost for the Nazis' secret military rebuilding effort. The Treaty of Versailles, which had ended World War I, strictly limited how many people and weapons the German military could have. Adding – and communicating with – more units beyond the Versailles limits would require technically accomplished radiomen who understood shortwave radios and could send and receive Morse code at high speed. Amateur radio hobbyists fit the bill exactly, and were recruited directly into the armed forces, the intelligence services and the communications service of the diplomatic corps.

They also taught radio skills to active duty soldiers and future recruits, like the Hitler Youth and men preparing to join the German Navy. Having amateur radio hobbyists do the training let the German military avoid tipping off Britain, France, Belgium or the United States that Germany was rearming on a large scale. All the new radiomen on the air could be explained as just simple hobbyists.

The German ham radio organization, the DASD, provided other technical expertise too, such as identifying frequencies that might be useful for military communications. The SS Security Service even commissioned the DASD's main laboratory to design and build miniature radio transceivers spies could use to receive orders and report their findings.

## The price of survival

To keep transmitting under the Third Reich, German ham operators faced a terrible moral quandary. Like all members of German society, they had to accept close scrutiny from security forces. But to keep operating their radios, German hams had to participate actively in the Nazi regime, driving Jews and anti-Nazis from their hobbyist ranks and collaborating closely with authorities, including the SS and intelligence services.

In retrospect, the DASD's relationship with the Nazis was too close. But it is in the nature of dictatorship not to allow people to stand on the sidelines. Ham operators who considered resisting the Nazis faced a special challenge: Unlike dance groups or musicians, radio technicians had strategic skills and therefore were more likely to be sought out and compelled to help the regime. Refusal might mean loss of economic opportunity at best, arrest, concentration camp or even execution at worst. The potential consequences were clear.

Faced with the choice of flight, open resistance or collaboration, most chose collaboration, particularly because this allowed them to continue their cherished hobby. The problem is, in the Third Reich, there was no such thing as a little complicity. It is a sad irony that even hobby clubs, one of the pillars of civil society, were used by the Nazis to cement their dictatorship.

## Getting Loaded (antenna-wise, anyway) by Dan Romanchik, KB6NU

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



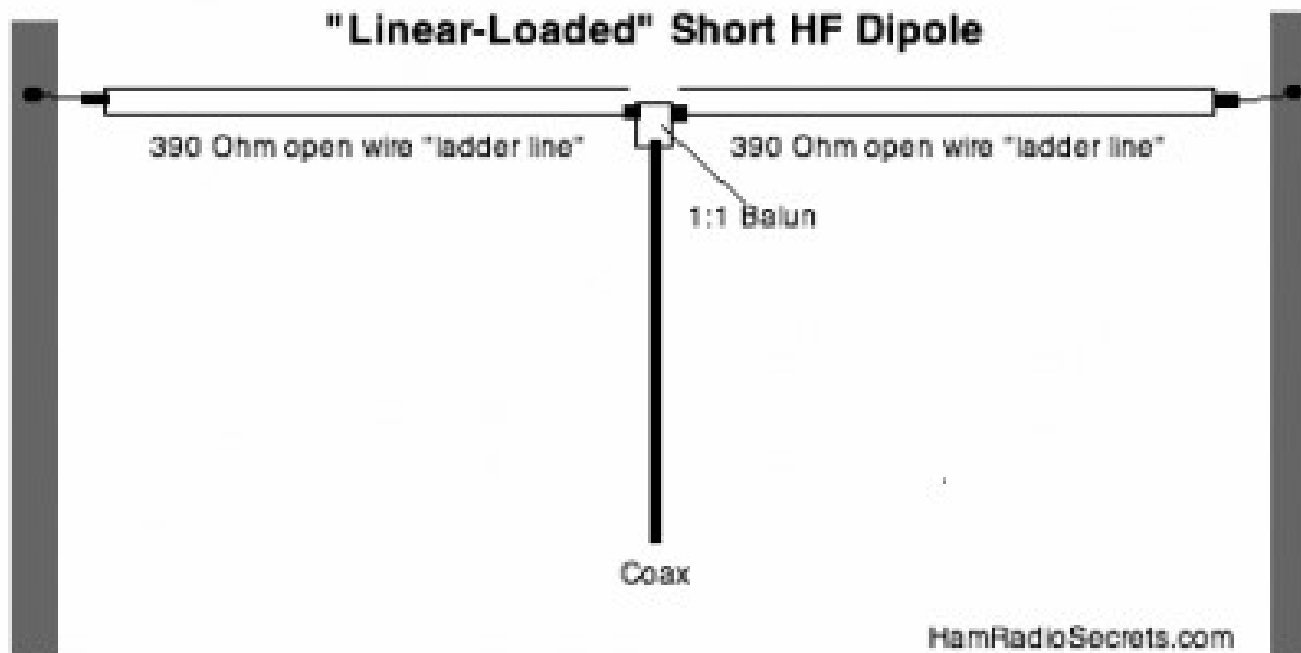
My antenna uses a lightweight, three-conductor rotor cable that used to be available from Radio Shack. The feedline is 450  $\Omega$  ladder line that connects to an antenna tuner to give me multi-band operation.

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

The *ARRL Antenna Book* has a short section on linear loading. It says that linear load-

ing is a "little understood" alternative to inductive loading that can be applied to almost any type of antenna. Furthermore, "...it introduces very little loss, does not degrade directivity patterns, and has low enough Q to allow reasonably good bandwidths."

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



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

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

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

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

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



## Meeting Information

*NODXA* Meetings are held the first Monday of each month at the *Gourme Family Restaurant* at 15315 Pearl Road (Rt. 42) just west of Interstate 71 and south of Rt. 82 in Strongsville at 7:30 PM. Come early and have dinner and meet your fellow DXers and enter the 50/50 raffle.

## NODXA Information

NO8DX: Special Event Callsign  
 W8DXA: NODXA Repeater 147.360

Web-site: <http://www.papays.com/nodxa.html>  
 Newsletter Submission: [wd8iou@adelphia.net](mailto:wd8iou@adelphia.net)

## NODXA Club Officials for 2018-2019

President:	Tedd Mirgliotta, KB8NW	(440-237-2816)
V. President:	Dennis Stuber, K8LBT	(440-628-1959)
Secretary:	Glenn Williams, AF8C	(440-934-5566)
Treasurer:	Mary Michaelis, N8DMM	(440-236-5426)
Newsletter:	David Autry, WD8IOU	(440-238-0417)



INDEXA

## DXCC Info

As of January 2018, the current DXCC Entities total is: **340**.

## NODXA Application and Renewal Form

The Northern Ohio DX Association is a non-profit organization with a primary interest in DXing. We encourage all DXers to join our group and share the interest and fun of DXing.

Please complete the application below and send along your appropriate dues or renewal to:

NODXA, P.O. Box 361624 , Strongsville, Ohio 44136

First Time Membership/Renewal (U.S. and DX) \$20.00

Name \_\_\_\_\_ Callsign \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Country \_\_\_\_\_ ZIP \_\_\_\_\_  
 E-mail \_\_\_\_\_  
 Telephone \_\_\_\_\_  
 ARRL Member? \_\_\_\_\_ Exp. Date \_\_\_\_\_ DXCC Member? \_\_\_\_\_  
 Special Interest \_\_\_\_\_

## Newsletter Contributors

Thanks to the following for their contribution to this months edition: N8TR, N8DMM, KB8NW, AF8C, K8YSE, KB6NU, WT80, and Bruce Campbell.