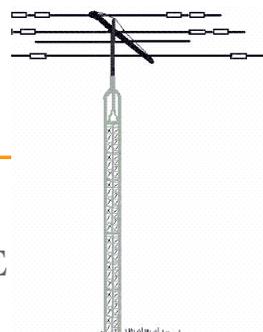




Official Newsletter  
of the Eastern Iowa  
DX Association

**NØDX**

Established 1975



# The Eastern Iowa DXer



An affiliated club of the American Radio Relay League

SPECIAL **ALUMINUM** ISSUE

October 2012

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Club Officers:

President:	Richard Heinrich	NØYY	<b>Packet Cluster:</b>	<b>WB8ZRL</b>
Vice President:	Jerry Rappel	WWØE	147.51, 144.91, 223.40, CRNETROM	
Secretary Treasurer:	Richard Haendel	W3ACO		
Repeater Committee:	Al Groff	KØVM	<b>Repeater:</b>	<b>NØDX/R</b>
	Joe Finkstein	WØMJN	144.59 / 145.19 (tone 192.8)	
Membership Committee:	Jim Spencer	WØSR		
	Tom Vavra	WB8ZRL		
	Nelson Moyer	KUØA		
Webmaster:	Jason Joens	KDØMND		

**Tom Hise, NCØO SK - April 12, 1943 – August 15, 2012**

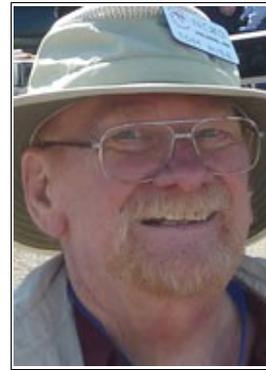
Next EIDX Meeting – Friday October 5<sup>th</sup>, 7:30 PM, room 219C of Linn Hall on the campus of Kirkwood Community College. Cedar Rapids.  
★ Program - DX4Win presentation by Craig Fastenow, KØCF

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## Tom Hise, NCØØ SK

April 12, 1943 – August 15, 2012

The world became a weirder place on April 12, 1943, when Tom Hise was born in Toledo, Ohio. Tom married Jan Crist on Dec. 7, 1974, in Delmar, Iowa. Tom Hise, 69, of Shellsburg, passed away peacefully in his home on August 15, 2012. He is survived by his wife, Jan and two sons.



Tom's hobbies included canoeing, astronomy, photography, reading science fiction, the SFF Net, family, and, most of all, he enjoyed amateur radio. DXCC CW (321/325), Mixed (325/329), and 5BDXCC. And also attended the monthly lunch gatherings with his amateur radio buddies. First licensed as KN8JWV in 1957, using a Johnson Viking Adventurer. In 1966 he graduated with a BSEE degree from the University of



Michigan. Then started work at Collins Radio Co. (later Rockwell International) where he was employed until retirement in 1998. While there, he was involved in a wide variety of areas from automatic test equipment to inertial guidance equipment. The majority of his 32 years there were spent working on GPS software and hardware.

He had little time for radio in the 70's but working at Collins radio and surrounded by hams, was eventually lured back to the hobby. With the encouragement of WØEJ, KCØQ and others. He began studying code in earnest. Finally, in 1983, he took the exam in Des Moines at the last FCC conducted session held there. Immediately he began chasing DX and by 1985 had DXCC and became a full member of the EIDX. WØIZ, WØSR, were some of his DX pals.

Tom was one of a kind, keeping his off beat humor and love of the unconventional to the very end, and will be missed deeply by all who knew him. In August of this year Tom and Jan made a donation to the club of \$400.00. With these additional funds, we can provide much needed support for selected Dxpeditons. All the members of the EIDX would like to thank you for your generosity ! (From the gazette.com). **REST IN PEACE.**

Our condolences and sympathy are with his family.

# The Eastern Iowa Dyer

[www.eidxa.org](http://www.eidxa.org)

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I hope you enjoy this newsletter. The views expressed in the EIDXA newsletter do not necessarily reflect those of the Eastern Iowa DX Association, or the editor. All newsletter contributions, comments and suggestions are welcome at [WWØE@q.com](mailto:WWØE@q.com).

Thanks in advance for your newsletter input.

~ WWØE ~

**President's Propagation, Pronouncements & Pontification****EIDXA President *Richard Heinrich*, NØYY**

Wow, another year has passed since I stepped in for Steve, N0SM last year. I truly enjoy the hobby and the people I encounter. This has been another good year.

But it has also been a year with significant loss. Our good friend Tom, NCØØ passed after a long and valiant struggle. We enjoyed lunch together and then he was gone. Other members were helping with his 160M antenna just days before. He kept his struggle in perspective and was another that truly enjoyed the hobby. He and his wife Jan, traveled to Dayton this year and Tom always had a smile on his face whenever I saw him. He will be missed.

I'm writing this on the heels of another wonderful picnic hosted by Karin, KØEGQ. The weather was perfect, the brats perfect – what more could you ask for? Several members got to operate the station in hopes of working NH8S as the operation was drawing to a close. It was also fun to recognize one of our own. Karin was granted Lifetime Membership in EIDXA for her continued support of the EIDXA family, our traditions, and to the ham radio community. It was one of those pleasures of being part of the leadership to be able to present the plaque to her at the picnic.

And what kind of a Prez would I be if I didn't recognize the Brat Meister and his wife for their OUTSTANDING preparation of the hot foods and the slaving over the hot grill for all our benefit – thanks Terry and Shanna. Now Terry thinks he is the Brat Master – but we all know that a bratwurst is a German delicacy and for that he should be a Brat Meister so let this column proclaim Terry as the true Meister of the grill! But in all fairness the food brought by everyone made the picnic a success. The salads, pies, cookies – oh my! Plenty for everyone.

And the club has taken another turn in its perspectives. Stimulated by the recent presentations by Glenn, WØGJ and another by Craig, K9CT,

we have taken on a new dues structure to allow us to contribute more significantly to deserving DX-peditions. At the last meeting we stepped up to support NH8S, PTØS, and the ZL9HR operations. It will be an honor to support those opportunities that arise, but it also puts another responsibility on the club to make sure that the effort meets the right “criteria” for our contribution.

Our webmaster – Jason, KDØMND has provided us a new forum for exchanging our treasurers. Our Website now has a “For Sale or Trade” column. Just send things you would like posted and the contact info and Jason will get it listed. Thanks Jason for making this happen seamlessly.

One only has to step back and look at the on-line activity lists to see our humble club showing up in a variety of ways. Jim, WØNB will again support the PJ2T CQWW DX CW entry as the official chef and one of its key operators in this year’s assault in an attempt to win the elusive #1 position in the Multi/Multi class. Glenn, WØGJ is working on his next DX-pedition all the while moving to a new home in Decorah. NYØV is listed as the elite in the CQ Marathon this year. Interesting to see how such a small club has far reaching influence.

It is also exciting to watch the club grow. This club – a local DX club – is more of a family of individuals with a common set of interests. We help each other, we reach out and offer our expertise, we share ideas, there is a strong sense of camaraderie among this group. New members pick up the tasks when someone steps down or relocates. It is wonderful to watch.

October 5<sup>th</sup> marks our annual meeting with the focus on the elections. Hopefully, we will have a slate of candidates for the leadership of the club. Some wish to continue, other wish to hand off the gavel of leadership. I have prepared another article on our club and the need for leadership elsewhere in this newsletter. Please read it and consider the request. We are only as good as our members and their interests and perspectives.

Also at this meeting we will be welcoming Craig, KØCF with his presentation on one of the premier logging programs – DX4Win. Many of us use the program for day to day logging and award tracking, but hopefully, Craig can give us some of the hints and tricks to make it even more effective. I know I will be there with my pen and paper taking copious notes. I hope to see you all on Friday, October 5<sup>th</sup> at our traditional meeting location.

*Rich*, NØYY

“Now that's DX”



EIDXA Vice-President *Jerry Rappel*, WWØE



### The Origin of DX, Cheers to club members, and Aluminum

After 91 days and 6 hours of scorching sun, summer is officially over.

Just when I thought I ran out of ideas, my brain wave for this October newsletter is Aluminum. Cool unpredictable October weather is when most antenna work seems to originate. So why not try a great 30 meter antenna project? It's a Feature Story in this issue submitted by Tom Lindgren, WØWP and Rich Haendel, W3ACO. In addition we have a special “Show Us Your Aluminum” section. Off we go.

As I begin my third year as Vice-President/editor in chief/typesetter of this DX club made up of fervent members who are receiving and identifying distant two way DX radio contacts – a considerable number of enthusiastic EIDXA members (well, I believe it was actually Steve) have asked me to tell the scientific account of how the term DX originated. So here it is, for the first time, preceding any other ham radio newsletter DX publication of this type.

The name of our hobby comes from the DX “telegraphic shorthand” for distant, or distance. DX is an early telephone term for distant exchange. On the old-fashioned switchboards with the plugs and cords, circuits coming in from distant exchanges had a label marked "DX" above the jack socket. The operator would plug into the circuit and announce the name of her exchange, (frequently they'd hear an irritable voice tell them “he's listening up 5-10 circuits”) as a DX confirmation to the distant operator that she was through to the correct destination. Then they would upload their exchanges to LOTW. And immediately call other operators on the switchboard and make boastful statements (mostly true) about the total number of their exchanges, before their switchboards crashed.



**Hats off to Tom**

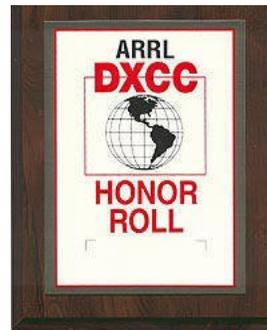
The delighted owner of the 2011 CQ DX Marathon plaque from CQ magazine. "Here it is. This is my First Place North America plaque. They don't give one for 3rd in World".



NYØV Tom Vinson aka Mr. DX

From Tom Vavra, WB8ZRL

On July 3<sup>rd</sup> I checked some cards for KØCF's DXCC application. One of the cards was SV2ASP/A on 17 CW. That card puts Craig on the DXCC Honor Roll.



**Congratulations to Craig Fastenow - KØCF**

## EIDXA Delights

Tom Vavra, WB8ZRL checked 53 QSL cards for me at the EIDXA meeting on August 3. He mailed the application on the next day. On August 17 the results were shown in my account status in LoTW. Two weeks from checking to completion. That has got to be a record! Terry Cellman, W0AWL.



At 1629 UTC this morning, August 28<sup>th</sup>, I submitted my yearly LoTW DXCC endorsement. At 1730 UTC I checked, and the application had already been processed and the records updated. Wonderful service! Tom Vavra, WB8ZRL.

**And yet another achievement** - the ARRL has credited me with enough band countries to qualify for the DXCC Challenge. Hooray !! Count is up to 1116. I'll order the wall plaque now. Rich Haendel, W3ACO.

John Andrews, AC0XY has recently received his "digital modes" DXCC certificate and is now a full member of the club. **Congratulations John.**

The Buy Sell Trade on the website is up and running now, and there is a list of items for sale there. EIDXA members can submit buy-sell-trade items to Jason Joens, KD0MND at [KD0MND@arrrl.net](mailto:KD0MND@arrrl.net). Anyone who wants something listed here can just shoot me an e-mail, and I can add or remove things quickly. Once your item sells, let me know so I can delete it from the list.

CW - Nothing beats "talking with your hands".  
After talking all day at work, I want a break!



**175<sup>th</sup>**    . . . . .

A method of transmitting text as sequences of short and long signals called "dots" and "dashes" was developed by Professor Samuel Morse of New York University in 1836. Seven years later, he sent the world's first telegram with the Biblical text "What hath God wrought" via a 64-kilometer telegraph cable laid between Washington and Baltimore. At the very start of his work on the dots and dashes code, Samuel Morse, who opened a new chapter in the history of telecommunication, took it as nothing more than an avocation.

And last but not least - the club wishes to express thanks to Rick, N0YY for being our fearless leader this past year.



Until next time, "Now that's DX" - *Jerry, WW0E*



# EIDXA SUMMER PICNIC

September 15th



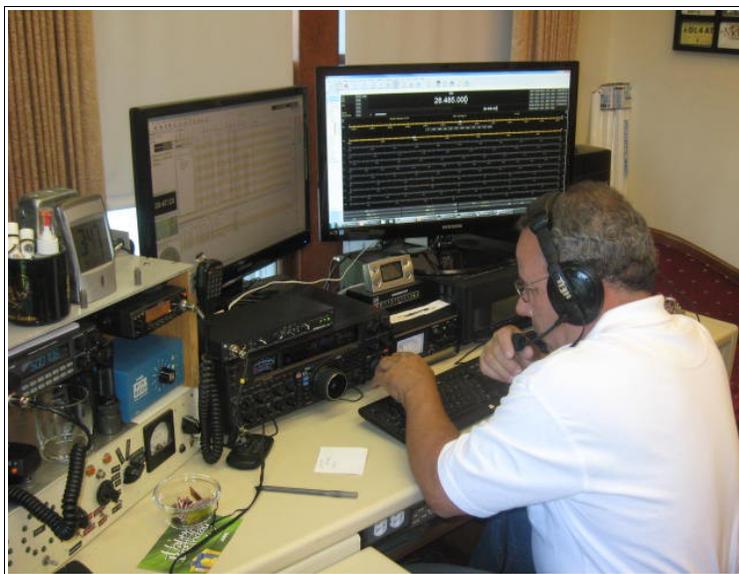
Karen Blamkenhagen, KØEGQ received the EIDXA Lifetime Membership Award at the picnic on Saturday.



Terry was the Brat Meister

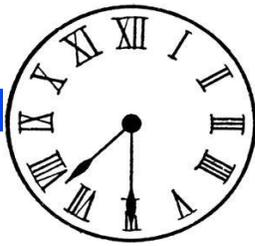
### Picnic Prizes:

Logikey K-5 keyer, Band decoder from Top-Ten Devices, Yaesu hat, West Liberty, Davenport, and Peoria hamfest tickets. Grand prize winner was Terry Cellman, WØAWL who won the highly sought after box of “Larry the Cable Guy” Beer Bread mix. Something for the members to nibble on at the next meeting Terry?



It was a privilege to be one of the guest operators at the NRØX - DX station.

Thanks to Karen Blamkenhagen, KØEGQ, Jerry Rappel, WWØE, and Terry Cellman, WØAWL for getting the prizes. And to Jason Joens, KDØMND for the mind-boggling antenna farm tour, and use of the NRØX - DX station. The weather was perfect. Most of all there was plenty of luscious food, desert, and DX conversation. A good time was had by all!



Secretary/Treasurer *Richard Haendel*, W3ACO

***EIDXA minutes of the August 3<sup>rd</sup>, 2012 meeting.***

Meeting was called to order at 7:30 PM by our president Rick, NØYY .

28 Hams answered the CQ call. Introductions were made all around.

W3ACO reported a checking account balance of \$869.79.

Jason, KDØMND, our webmaster, asked for input from members, photos of antennas, QSL cards, profiles, etc. Send material to WWØE.

Repeater committee, no report.

NØYY solicited volunteers for club officers, elections will be held at the next meeting in October. There was a discussion of support for upcoming DXpeditions. The vote indicated that the club should donate \$200.00 each to three DXpeditions, Auckland and Campbell Islands, ZL9HR, Swains Island, NH8S, and St. Peter and Paul Rocks, PTØS. W3ACO will transfer funds from EIDXA to these DXpeditions via his Paypal account.

There was a discussion of including a buy/sell trade page on our website. Jason said he will add this. Summer picnic. After some discussion, it was decided that the picnic will be held Sept 15 at NRØX QTH with a rain date of Sept 29. Picnic starts at 3PM, brats will be available by 5:30 PM.

Meeting adjourned at 8:15 PM.

There was an excellent video about the T32C East Kiribati DXpedition put on by the 5 Star DXpedition team from England.

## Out Club - It's Vision and Leadership

By Rick Heinrich, NØYY- EIDXА President

The Eastern Iowa DX Association has come a long way from the days of “one ringers” and 2M spotting networks – when “up 2kc meant up 2 kc” not up half the band! In many ways we have the leadership of the club to thank for that evolution in vision and growth in membership. Changes in the Bylaws and the “rules” show that we could not survive in a single dimension – we have had to keep up with technology, policies, and prepare for what is coming next.

We have been fortunate to draw on those that get on the air, have a feel for what is happening, and stay involved in the policies and processes of our specific interests. Yeah we push those boundaries a bit, but that is because we learn from each other. The cross fertilization of contesters and DXers is an important exchange.

On October 5<sup>th</sup> we will hold our annual elections. This again is our pronouncement of our commitment to move forward. We have drawn on our membership for different ideas, strategies, and interests to help our club grow.

Recently several of you have received an e-mail from me asking for you to consider being part of the leadership of EIDXА. Some have respectfully declined; others have chosen to not respond. My hopes are that those of you that did not respond are still searching within yourselves to decide how you can contribute.

So in some ways I have failed the EIDXА membership. I was asked to be a “nominating committee of one” and I have failed to bring a slate of potential candidates. That is indeed unfortunate.

The good news is that we have two of our three leaders that have agreed to continue – Jerry, WWØE our Vice President and newsletter editor and Rich, W3ACO is our Secretary/Treasurer are willing to continue in their roles. That helps with consistency in our leadership.

I will step down after the October meeting. I have many other commitments begging for my attention. I have been in one of the leadership roles numerous times dating back to 1978 when I had the VP/Newsletter responsibilities.

To be blunt, there is a group of about 6-10 of our members that do most of the periodic tasks and support the club in many different ways. I cannot in good conscience ask them to step up yet again to take on the leadership “one more time” as I was unable to get some of our new or established members to step up. And in talking to them they are disappointed and probably a bit “angry” that the club is in this position as they don’t want to “just do it again because someone won’t step up.”

So on Friday, October 5<sup>th</sup> we will be taking nominations from the floor for President of EIDX. I urge you to attend to make sure your interests are served. If no one steps forward it is possible that our VP may have to take the helm while we seek a President. But I am confident that we can find someone willing to bring their perspectives, interests, goals, and challenges – whatever motivates them to take the gavel and “run the show”. You will not be alone - everyone that has held the position is there to help. The fact that we have a Program Committee has taken another of the responsibilities from your back. Your role is to stimulate discussion and to prompt the membership to think about the club – the “who and what” we are.

The good news is that I know you are active and aware of what is going on. I hear the calls in the pileups. I see the spots. I see you at ROMEO and other events and I know you understand the club and the community interests.

But you need to step up and take a chance. You can volunteer or you can be asked. But EIDX needs a President. **Please think about it one more time.** Talk it up via e-mail. Ask questions of the membership, but be ready on October 5<sup>th</sup>! Thanks!

Rick, NØYY



**EIDXA NEWS**

The **NRØX Memorial Beacon** is currently online, transmitting at 50.070.5 on 6 meters with 5 watts from an Icom 706 into a horizontal omni. The transmitted message is "de KDØMND/B EN42HB". I would be happy for any signal reports sent via e-mail, to [hblanken@netins.net](mailto:hblanken@netins.net). Jason KDØMND.

**~~MOST WANTED~~**

The 2012 Most Wanted Survey form is available on the DX Publishing web site. Go to: [www.dxpub.net](http://www.dxpub.net) and under the heading MOST WANTED SURVEY you will find a link to the form. Click on "2012 SURVEY." Several prefixes are in **BOLD** type. These are ones which may cause confusion due to their similarity, ie. 3D2, VK9, VKØ, etc. Please use care when marking these to be sure the correct one is counted. There are a few shown in RED. These indicate either an addition to the list from last year or a change in the prefix (ZK2 is now E6). There is a "block" at the bottom of the form for you to send along any comments, or to include any country that you need which is not on the list. The survey will be available until **October 15th**.

**Intruder Alert**

Tests on amateur radio band frequency 7105 kHz. Following the news of the DARC Bandwatch (similar to IARU Monitoring System) compiled by its director Ulrich Bihlmayer, DJ9KR: Radio Bangladesh is transmitting on 7105 kHz since Aug 13, 2012. The radio station has been spotted with a maximum of S9+40dB from 1820 – 1940UTC. Their homepage says their frequency is 7250 kHz. So please observe also this QRG in the evening and night hours and inform the bandwatch if you hear it!

Also an unknown burst system from France on 3500, 7000, 14000 and 21000 kHz which is active every day at the full hour. The signals are coming from France but the purpose is unknown.

Another unknown CLOVER 2000-mailbox has been spotted in the 21 KHz band during night and day. This commercial mailbox sent idle tones on 21138.5 kHz and its location is supposed to be in the Sultanate of Oman in the Middle East. In July, the 15 meter band was again disturbed by the emissions of OTH radars from Turkey and from the UK Royal Air Force on Cyprus. Mario, DGØBJ, sent 27 reports of radars in this band. Due to poor conditions on 28 MHz the radars avoided the 10 meter band in July. Also for July Georg, DJ7KG, sent 203 reports of illegal driftnet buoys in the 28000-28450 kHz range using CW Id's with one, two or three letters. If you discover a pirate radio within exclusive radio bands report it online to the "Intruder Logger". Take advantage of this opportunity: <http://peditio.net/intruder/bluechat.cgi>

DXNL 1794



*SSTV image following brief WFZY pirate broadcast on 6925 kHz.  
One of two known to occur. (MT magazine)*

A dark blue banner with a world map background. On the left is a glowing globe. The text 'PTOS' is at the top center, followed by 'St. Peter &amp; St. Paul Rocks' and 'DXpedition'. On the right is the logo for 'Arucária DX Group', which features a stylized tree.

**PTØS November 10 - November 22 EIDXA sponsored**

**P29NI Papua New Guinea**  
**October 27 2012 - October 31 2012**

**Sable Island WA4DAN/CYØ and AA4VK/CYØ**

We have received approvals from "Parks Canada", "Canadian Coast Guard", and "Officer-in-Charge, Sable Island" to operate from Sable Island October 8 - 17, 2012.

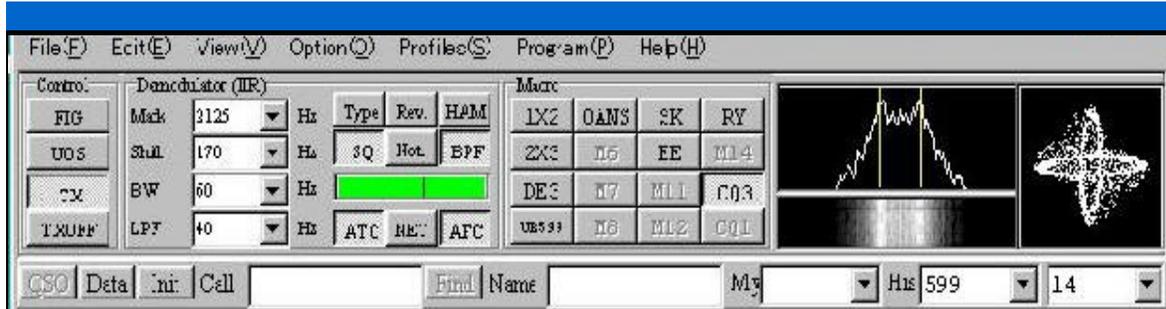
**Z6ØK on air Sept 17<sup>th</sup> ? WFWL**

REPUBLIC OF KOSOVO. Excerpts from the IARU Region 1 Web page reports: "Monday, September 10, 2012 marked the end of supervised independence of the Republic of Kosovo, a European country with a population of 2 million, and the beginning of its status as a fully sovereign state." It also states, "Kosovo is now an independent country, which must be honored as such. As of today, a total of 91 countries, including most of the industrialized world, such as USA, Japan, Germany, the United Kingdom and France along with the Benelux and Nordic countries, have recognized the Republic of Kosovo. These powers have endorsed the final settlement, the fulfilment of which is now celebrated in Kosovo's capital Prishtina. An Amateur Radio working group headed by IARU Region 1 President Hans Blondeel Timmerman, PB2T, and including IARU Region 1 Executive Committee Member Nikola Percin, 9A5W and Mission Goodwill Kosovo Coordinator Martti Laine, OH2BH, together with their associates are in the final stages of assisting Kosovo's Telecom Authorities in drafting regulations governing Amateur Radio in Kosovo, to bring the original Kosovar operators and their re-vitalized Amateur Radio Association back to the international community. (Go List)

**ZL9HR Campbell Island November 28th - December 9<sup>th</sup>**

**ZL7A - CHATHAM ISLAND November 1<sup>st</sup> - 9<sup>th</sup>**

## RTTY Corner - Jerry Rappel WWØE



RYYRYRY Hi Jerry, I didn't realize you were working the P5 Dxpeditioun.  
It's 75 degrees in Ottumwa today.

Hi Glen, nice to make it into Ottumwa, - 73 KØJGH de WWØE

WWØE de P5/W3ACO are you still there, seems to be someone on the frequency, ur 599 into  
Pyongyang, how copy ?

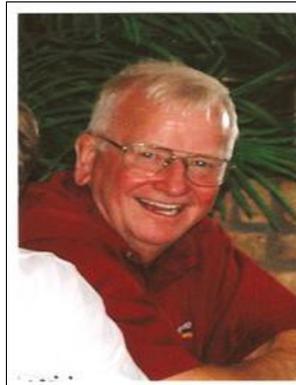
(DX Police) He's only working 6's now !!!!!

All DX mentioned in this column is referred to as being RTTY,  
unless otherwise noted.

Kind of peaceful in the RTTY Corner this month.

- x Only a handful of stations in my RTTY log book - 1AØC, KH2L, SU9VB, EA9IB, FS/F8PDL, C31KC.
- x Tom Vinson, NYØV submits his RTTY catches: 6O3A, KH2L, S52WW, A45XR, 1AØC, HV5PUL, 5C13YZ, Z39A, H44UD, 9K2OK, UN1L, RN4NAR, 6Y5WJ, D64K, E51AIU, PJ5/K3TRM, JY4CI'.
- x From the log book of Glen Kesselring, KØJGH: E51M, SU9VB, 7O6T, S79RR, E4ØB, 4Ø7VB, 1AØC, E51IAU.

Thanks for the RTTY logs guys.

**Member's Spotlight****NNØL*****RON BORKGREN***

I received my Novice in 1978, General in 1979, Advance in 1981 and Extra Class in 1985. I loved to work CW when a novice but when I got the phone privileges I kind of got away from it. But then the DX bug got me and so CW came back into play. I like to chase DX and have 317 countries worked and 314 confirmed. I am a life member of the ARRL. I like working 160 thru 2 SSB and CW.

The base station here consists of an ICOM-746PRO - 160 thru 2 meters. Also have an original Icom 706 for mobile and enjoyed working anyone and everyone before I retired in November 2007. I really don't do as much mobile at the present time. For QRP I have a KWD TS-140S, and HeathKit HW-8.

A Rohn 50 foot fold over is the support for a KLM KT34A Triband beam at 55 feet, with an 11 element 2 meter CushCraft on top of it. I have an inverted V (Dentron Tuner) for 80 thru 10 and a J pole for 6 meters. Also have a Comet GP6 2/440 dual band vertical at 20 feet.

I have a beautiful and understanding wife and 3 grown, daughters. My youngest daughter is a ham, NØTFY. She is not active anymore, but still likes to talk ham radio with me. I hope to get my 3 grandsons into ham radio sometime as they sure like to play with my keyer, it is a start (HI).

In 1999 I retired from a private Electrical Utility based in Cedar Rapids, Ia. when they offered a early out program. I started out at Anamosa, Ia. 1964, on the line crew as a truck driver, then lineman for 19 years. I then went into management to do dispatching, buying and selling power to other utilities in Iowa and with surrounding states. Also did the switching of the major transmission lines 345,000 volts on down for all of Iowa Electric's territories. Being a young man of (56), I had to find other things to do. I then worked at repairing and selling campers, and sales in the auto department of a farm store. Where I delivered auto parts to auto dealers and mechanic shops in eastern Iowa from a automotive supply store, until I finally retired for good in November of 2007. Wanted to do more talking on the radio, but the darn Sunspot Cycle got me. Had hoped for better times (but) then things did not go like I wanted. Now that propagation is getting better, it will be lots of fun again.

I like to work some contests, (not for scores), but only to pass out contacts to others and to work new countries that I need. And also enjoy checking into area nets and rag chewing.

I am currently a member of the Eastern Iowa DX Club in Cedar Rapids, Ia. The Breakfast Club, The Eye Bank Net (mornings), and also the Jones County ARC in Anamosa, Ia. where I am the Secretary Treasurer. I have held the positions of President, Vice President also through out the existence of the club. My old calls were KAØBPT and KCØBQ.

Hope to work you on the bands, and if we have worked before Thanks for the contact.

73 Ron. (Ronnie )

## Feature Story

## A Gain Antenna for 30 Meters

Tom Lindgren, WØWP and Rich Haendel, W3ACO

### Introduction

Have you ever thought of a gain antenna for 30 meters? You may want to consider this two element yagi solution. Get this, full sized elements with an 8 foot element spacing and 6.5 dBi gain and front to back comparable to conventional 3 element designs. Yes only 8 foot spacing of elements, a very attractive solution for such a low frequency.



Here is how it all started. My fellow Eastern Iowa DX Club member, W3ACO, Rich, suggested I put up a two element 30 meter yagi fabricating it from parts from my scrap Telex/HyGain 402BA antenna. It became apparent that a 2 element driver-reflector yagi would have a gain of about 6.5 dBi and a front to back ratio of about 10.5 db. The boom length would be around 18.5 feet. At 18.5 ft boom length, the 50 ohm SWR was very low. Rich said I would only need an 8 foot element spacing for the 30 meter antenna. Honestly, I was very surprised by that number. How could this work properly with a two element beam? I was under the assumption a two element beam had a reflector and a driven element. Rich said no, I could get comparable gain with a director and a driven element because of the narrow bandwidth of 30 meters. I could also obtain good front to back ratio. Using EZNEC 5.0 software, Rich showed me the simulations and made me a believer that it could be done.

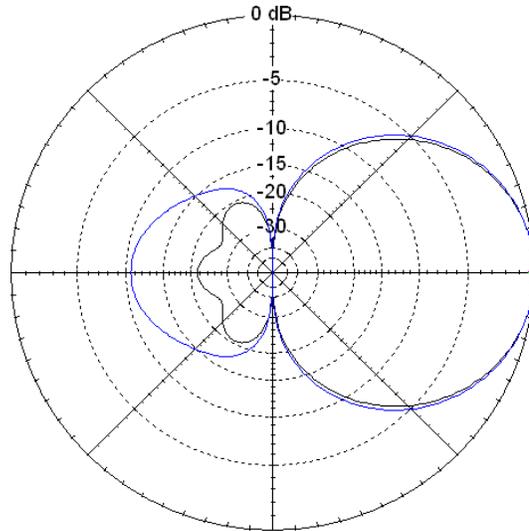
L.B. Cebik (SK) W4RNL several years ago, wrote a few articles about using a driver-director yagi although he never provided a design for 30 meters. A driver-director (D-D) yagi has some attributes and disadvantages. D-D yagis are inherently narrow band. For this band, this is not a problem. The natural impedance of a driver-director yagi is much lower than 50 ohms and the front to back ratio is significantly better, therefore we needed to develop a match to 50 ohm coax and also keep the antenna feed balanced. Most important, we could reduce the element spacing without compromising any gain.

Total Field

\* Primary

30M driver-reflector

EZNEC+



10.125 MHz

## Modeling

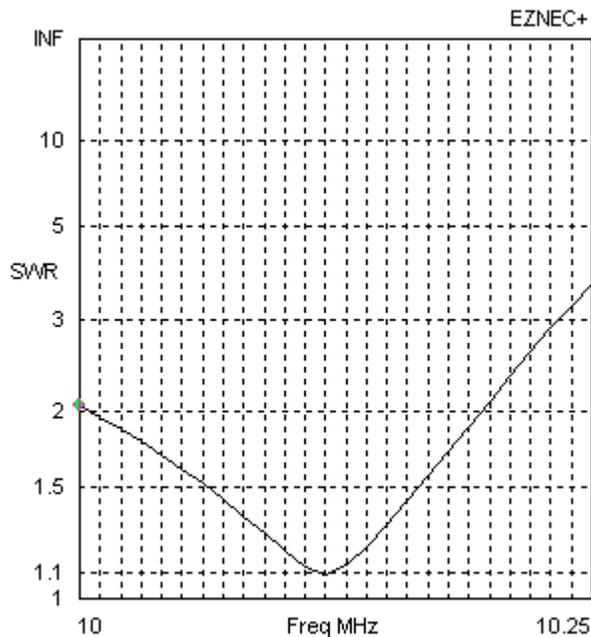
EZNEC 5.0 was used for all the modeling. The first models for comparisons used 1" constant diameter elements. The spacing and element lengths were varied to obtain good F/B ratio and match to the desired 22 ohm impedance. The D-D yagi that evolved from EZNEC indicated that 6.6 dBi gain, a F/B ratio of about 20 dB and a 1.5 to 1 SWR bandwidth of 100 KHz could be obtained with an element spacing of 8 feet. The impedance at this spacing was 22 ohms.

Reducing the spacing to 7 feet dropped the resonant impedance to about 17 ohms, increased the gain to 6.75 dBi and reduced the 1.5 to 1 SWR bandwidth to 80 KHz. We felt that the 8 foot spacing and 6.6 dBi was a good compromise. Although Rich tried, he could not get good performance from a driver-director yagi with loaded elements so he stayed with full sized ones. Both elements were insulated from the boom to avoid changing the element lengths to compensate for metallic mounting plates. This wasn't as bad as we wanted to feed the driven element directly anyway.

The constant diameter 1" element models were converted using a taper schedule from 1.5" center section to 1.0" at the tips. Only one element at a time was changed from the 1" model to the tapered element schedule. Performance was checked before changing the second element.

Tip lengths, one at a time were readjusted to duplicate the initial model performance.

The tapered model showed a gain of 6.67 dBi and a worst case F/B of -20.7 dB. SWR referenced to 22 ohms showed better than 1.5 to 1 from 10.06 to 10.16 MHz, perfect !



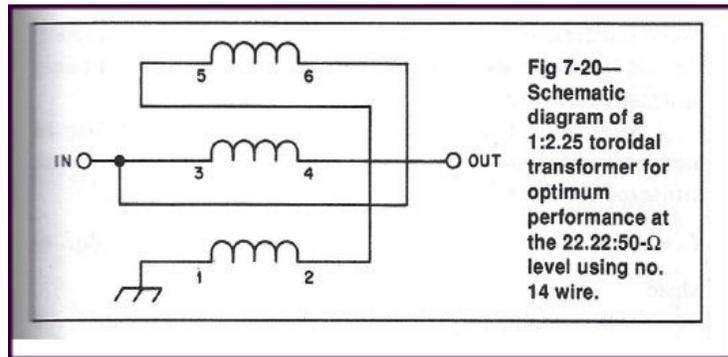
***Figure 2 Modeled Antenna SWR through the 50:22 ohm transformer. Each increment along the horizontal axis is 10 KHz.***

### Matching

Jerry Sevick W2FMI (SK) wrote an excellent book, “Transmission Line Transformers” published by the ARRL. In the second edition of the book, Figure 7-15 indicates that the insertion loss of a 50 to 22 ohm transformer at 10 MHz should be less than 0.04 dB.

Steppir mentions in their literature that they used the W2FMI design in their yagis. We duplicated the Steppir design using an FT-240-61 toroid and 6 turns of trifilar #14 wire for the 50:22 ohm impedance transformation. Figure 7-20 in the W2FMI book shows the schematic.

To provide a balanced feed for the driven element, Tom fabricated a short length of 22 ohm coax cable using #12 stranded Teflon insulated wire and the shield from RG-58 coax cable. The 22 ohm coax was covered with shrink tubing before winding it onto the toroid. He used 6 turns for the 22 ohm 1:1 balun as well. Both the transformer and balun were wound on the single core. The soldered connections between the transformer and the balun were covered with RTV.



In this figure, copied from the transmission line transformer book. “IN” is the 22 ohm side and “OUT” is the 50 ohm side. Note that winding 3-4 is between the other two windings.



**Figure 2** 50:22 ohm transformer and balun with 22 ohm load

The SWR bandwidth of the as-built transformer was measured using a small 22 ohm load shown in Figure 2 and a HP 8753E Network analyzer. The return loss exceeded 30 dB (1.06 to 1) from 1.8 to 30 MHz.

## Building

The ARRL antenna handbook indicates that element tubing should overlap by 3". ON4UNs "Low Band DXing" suggests a tubing overlap of 15 cm or about 6" so Tom decided to go with the larger overlap.

After reviewing left over hardware from the 402BA, Tom decided to use only the center section of the boom and the boom to mast plate from it. The element tubing, clamps, fiberglass insulator plates, and the center fiberglass rod, were all ordered new. The 50 ohm to 22 ohm balun was fabricated with Rich's guidance.

Structural Fiberglass sheet, 1/2" Thick 4" X 96" part number from McMASTER-CARR p/n 7251K25.

Structural Fiberglass rod 1 1/4" diameter (5 foot length) McMASTER-CARR p/n 8543K1.

Tubing used (from Cycle 24) 6063-T832 type:

p/n AL24-1500 (1.5" dia.)

p/n AL24-1375 (1.375" dia.)

p/n AL24-1250 (1.25" dia.)

p/n AL24-1125 (1.125" dia.)

p/n AL24-1000 (1.00" dia.)

U-bolts with boots, Hose clams, nuts, bolts, and washers were all purchased locally. Stainless steel hardware would be preferred.

Construction of the antenna went smoothly. Tom used 6 inches of overlap in from each element tubing section. Along with slitting each tubing section as ON4UN suggests in his book, and using hose clamps for compression the individual elements were assembled. The center insulating fiber glass rod used was .125 inches thinner than it needed to be.

Two pieces of 1.375" aluminum tubing were used as spacers over the fiberglass tube to make up the difference. This worked well and kept the mechanical integrity of the driven element intact.

The Balun was installed in a weatherproof fiberglass box with a female N connector to interface with the feed line. A small drip hole was cut on the bottom side of the box to prevent trapped moisture from forming. The two wires with spade lugs, going from the driven element to the Balun box, about 1 ½” long, were weatherproofed with coax seal. A 3/8” lag bolt was used to pin the elements to the boom. This is to keep the elements from skewing in the wind. The elements to the boom are attached with U-bolts, one on either side of the ½” thick fiberglass plates.

The installation of the antenna on a 48 foot HBDX tower went smoothly. The short boom made it easy to manage raising it in place. With an element on either side of the tower base, the antenna was winched up to the proper height and easily fastened to the mast. Leveling the elements to the horizon and aligning it to the proper direction was much easier than the 402BA installation. Tom is now able to stretch out to the Balun box for inspection of the coax connection and hardware tightening from the tower top, as the elements are only four foot from the center of the tower. Tom recommends pinning the mast to the boom plate to keep the antenna from skewing in the wind. This is a big antenna to keep in place.

Tuning the antenna on the ground in saw horses is not recommended. Tom found the VSWR no better than 3 to 1 and resonant frequency to be much lower than Rich’s target frequency. Tom decided to install the antenna and hope for the best. Sure enough, the VSWR and resonant frequency were as modeled, no final adjustments in length needed.

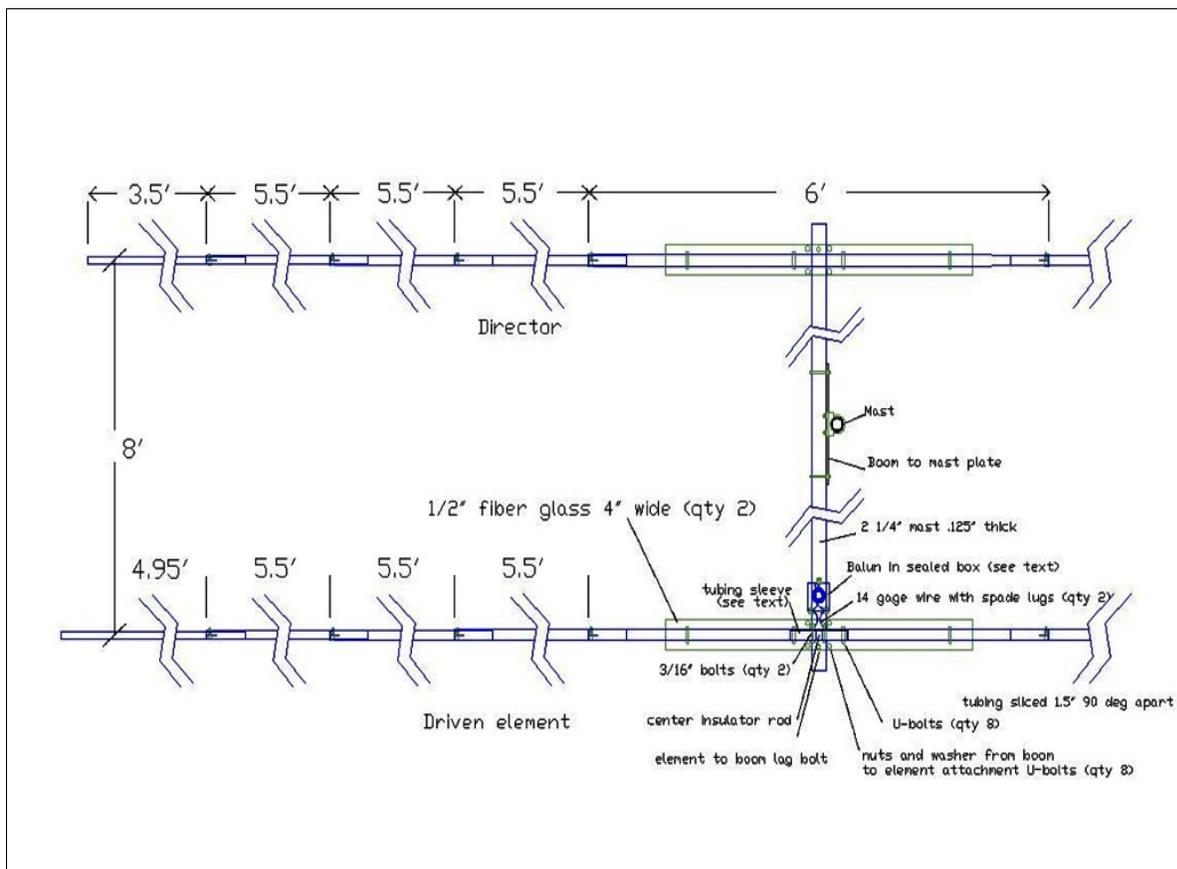
### **Performance**

How does it work? Tom says it is way more than he expected. The Butternut vertical with raised radials that Tom previously used on 30 meters cannot detect signals he can easily copy Q5 with the yagi. Tom has logged more than 40 countries in the first two weeks since installing the antenna.

An example of those logged include: VU2, A7, 3B8, 4L1, 5N, TF, UL7, 4X4, 7Q7, TU2, SU, OY, and many Europeans. The front to back seems to be about four S units and the side rejection is really incredible, the stations just disappear as the beam approaches 90 degrees from its bearing.

In conclusion, Tom has enjoyed building the **shorty** 30 meter yagi and hopes to enjoy many years of use with it.

Modeled elevation pattern at 50 feet Gain = 11.33 dBi.





Driven element



Element to mast

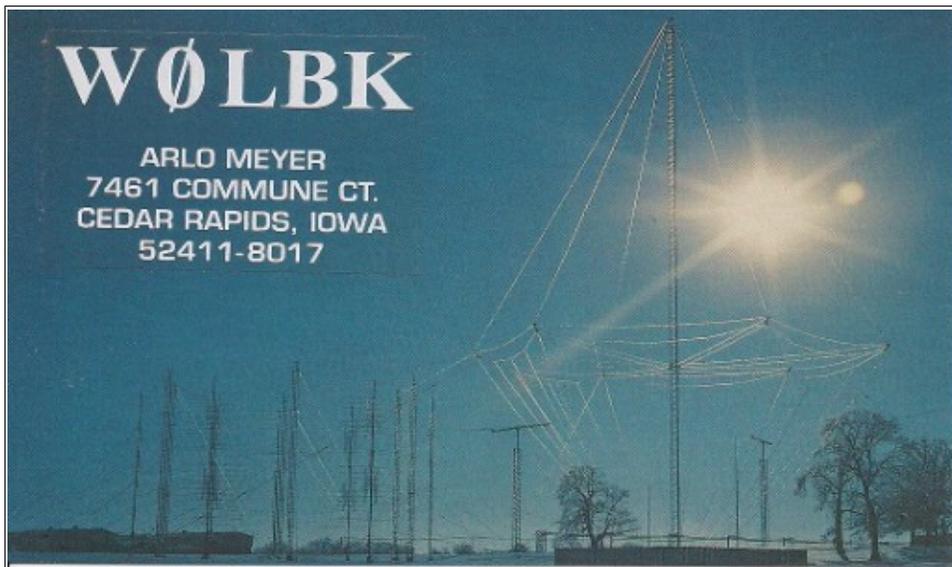
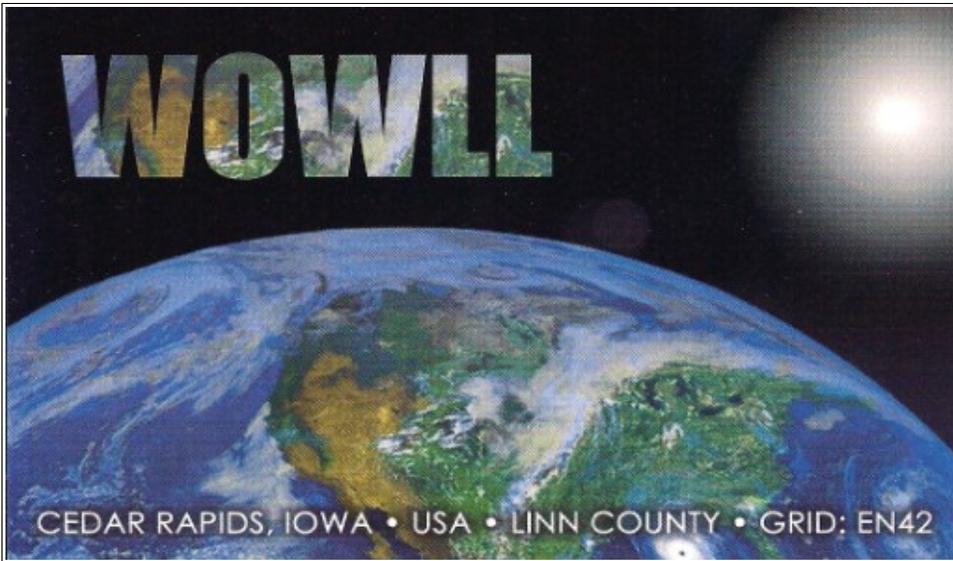
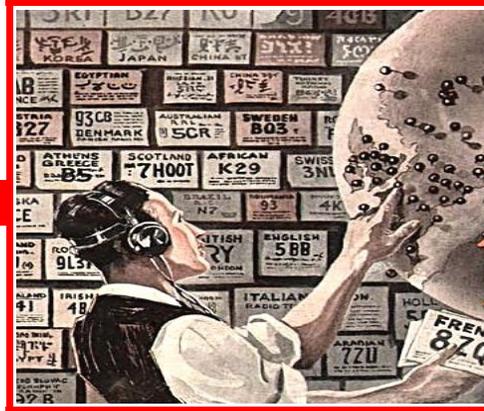


On the sawhorse



I counted countries in my log from the time I put up the beam until now and the total is 107 countries. That being said, with only 2 countries from South America and only 4 from the Caribbean. Tom Lindgren, WØWP

**PSE QSL**



## Marion Dufresne

The country of Mayotte issued these stamps last December 2011. The Antarctic research vessel “Marion Dufresne” has been used by many Dxpeditions. The Marion Dufresne was designed designed for severe weather conditions. It is also used to service the districts of the Crozet and Kerguelan Islands, and the smaller islands of Amsterdam and ST. Paul, delivering supplies, fuel, and personnel to the three permanently manned bases there. Due to an increasing scientific demand, in 1999 the French Ministry of Research reduced the ship time devoted to logistical operations to 120 days per year and allowed the IPEV (Institute Polaire Française - Paul-Émile Victor) to conduct research world-wide, 245 days a year. Therefore, the ship is no longer confined to the Indian Ocean and conducts research in all oceans.



**SHOW US YOUR ALUMINUM**

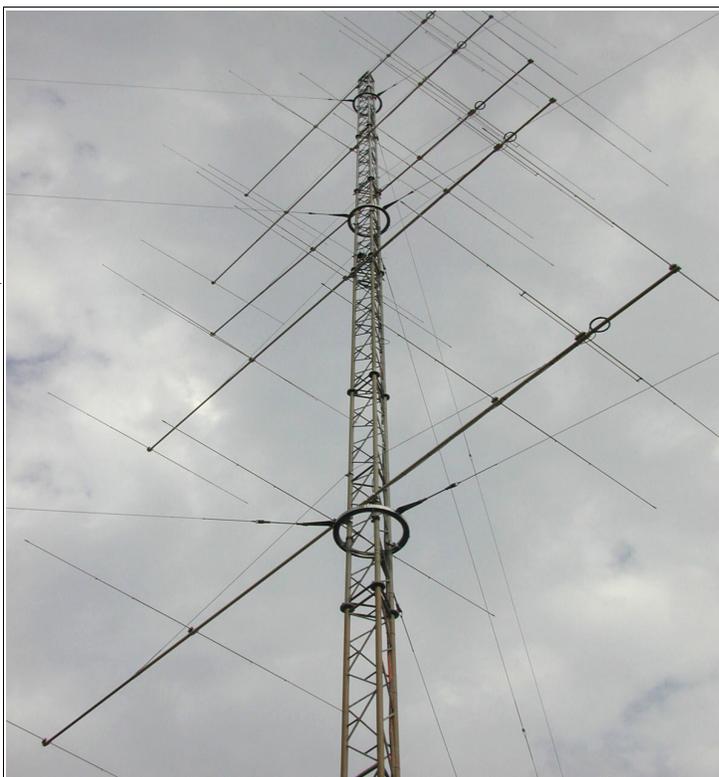


Tom Hise, NCØØ

Antennas are a Mosley Pro-57 beam (20,17,15,12, and 10m) up 60' and a SteppIR BigIR vertical with 80m coil (80-6m).



From Karin Blamkenhagen KØEGQ. The Southeast tower: there are 6 antennas, all of which are home brew. Three stacked 7-element beams for 10 meters, and 3 stacked 6-element beams on 15 meters. Antennas are fed through a STACKMatch, by Array Solutions. The tower was bought from an out-of-business radio station in Anamosa. Heinz built the rotating base for the tower, and the ball bearing guy rings to build this (and one other matching) rotating tower here on the farm.



Joe Huntgate – K8OM

Looks like the Guaranty Bank coming to reposes the Yagi ?



The HF yagi is a Force 12 C-3SS and the upper antenna is a 13 element CushCraft 2 meter yagi. The standard 40 and 80 meter dipoles are also strung off of the tower. The tower is 50 feet of Rohn 25 with a Yaesu G-800 rotator.



Gary Huff, KWØJ: Hi-Gain TH-7, Cushcraft D3W, and a G5RV Dipole. Also has the M/2 6 meter HO Loop at 40' and 2 meter Ringo Ranger II.

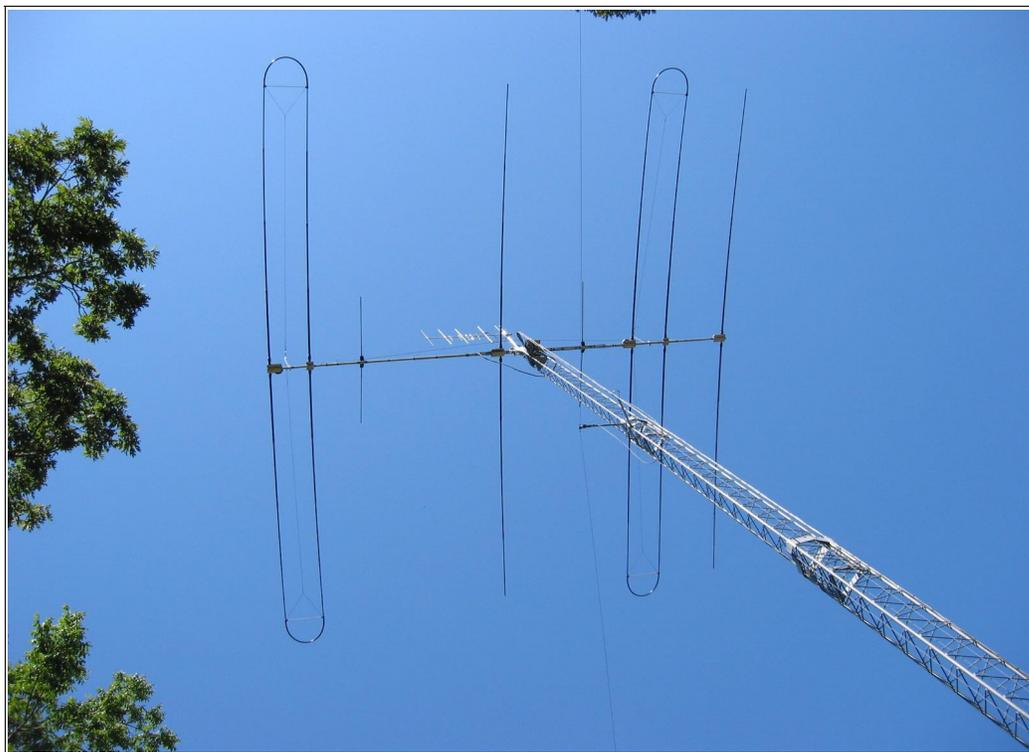
Terry Cellman – WØAWL



The beam is my Bencher SkyHawk at 33 feet, which is used on 10-15-20. Above the SkyHawk, at 35 feet, is a CushCraft rotatable dipole for 12-17-30 meters.

The Vertical is a Butternut which is used mainly on 40 meters. It is also used on 80, but does not seem to be near as effective on 80. My DCXX totals on 40 meters have reached 240.





Tom Vinson, NYØV, I have a modified 4 element SteppIR in which I added another 40/30 trombone loop at the D-2 position. That provides 2 element on 40 and 30m backfired and then 4 elements on 20-10 and 6 elements on 6m all on the 32' boom.

The tower is a Tri-Ex LM-470 HD 70' motorized tower with crank over winch and the NN4ZZ "tilt plate". The tilt plate enables the antenna to stay horizontal when the tower is cranked over. This enables full access to the antenna at waist level so I can work on it on the ground.

I also have a 2 element phased vertical array on 40m with one of the verticals being a Big IR SteppIR with the 80m load coil mounted on it. The second vertical is a DX Engineering fast taper 40m vertical.



Rich Haendel, W3ACO. 3 element SteppIR with 6 meter parasitic element on a Tashjian 54 ft crank up tower.



Glen Kesselring, KØJGH SteppIR, etc.

Sam Burrell, KØAFN

A motorized TX-455, 20 foot mast, CushCraft X7 (7 element tri-band Yagi) and X240 (2 element 40 meter beam) Yaesu G-1000DXA rotor,



Thanks to everyone who contributed to this article.

*Mark your calendar for one of the area's  
most popular Fall Hamfest -*

***Southeast Iowa Hamfest Sunday, October 7, 2012***

*Sponsored by the Muscatine and Washington  
Area Amateur Radio Clubs*

**Muscatine County Fairgrounds 101 N Clay Street**

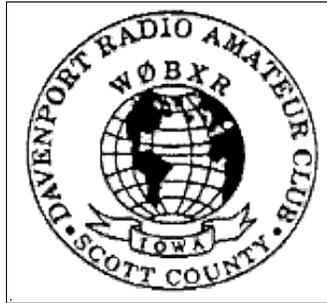


**West Liberty, Iowa**

**Gates Open At 7:00 A.M. All Tickets: \$5.00 14 & under free.  
Advance tickets have two door prize drawing stubs.**

**Hamfest Coordinator:  
Tom Brehmer, NØLOH - Iowa Section Manager  
114 East Tenth Street  
Muscatine, IA 52761  
Phone: (563) 263-3097  
email: n0loh@arrl.org**

***Make checks payable to Southeast Iowa Hamfest***



## ***Davenport Radio Amateur Club WØBXR***

***41<sup>st</sup> Annual HAMFEST***

***Sunday, November 4, 2012***



It is with great pleasure that I announce that this year's Davenport Hamfest will again be the **ARRL Iowa Section Convention!**

Coming to present a seminar is Larry Wolfgang, WR1B Editor of QEX, Senior Assistant Technical Editor and QST Technical Correspondence Column Editor. Larry will present a seminar at 10:30AM in the Bass Room at the Clarion Hotel on Sunday, November 4, 2012. He has several talks prepared for the day, we will have other seminars and presentations that day. Yours truly will present "My First Dayton" at 8:30AM followed by ARRL Midwest Division Director Cliff Ahrens, KØCA and Midwest Division Vice Director Rod Blocksom, KØDAS, with a presentation about "ARRL and Digital QST" in the Bass Room, which is next to the rooms where the hamfest will be occurring. I hope to see you there!

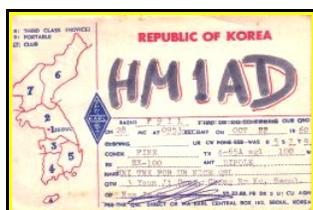
***Tom Brehmer, NØLOH***

**Iowa Section Manager**

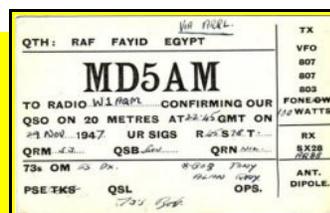
*Election of officers at the next meeting*



(courtesy F6AJA)



**For the next newsletter, please e-mail me a scanned image of**



**your rarest, most unique, vintage, (pirate), unattractive, smallest, etc. QSL cards. It'll be fun to see what members can dig out of their old QSL boxes. Thanks to Joe, K80M for the idea.**

*Thank You.*



*to the following club members for making this newsletter :*  
 K80M, W3ACO, K0AFN, K0JGH, W0AWL, K0EGR, KWDJ,  
 W0WP, NN0L, AC0XY, W3BZRL, K0CF, K0DMND,  
 W0WLL, N00V, and W0LBK.

*Jerry, W0DE*

**DXCC Card Checking Is As Close as EIDXA**

EIDXA members can get their DX QSL cards checked for DXCC credit from the following club members:

- ARRL Midwest Division Vice Director, and EIDXA member, Cliff Ahrens, KØCA attends EIDXA meetings as his

schedule permits. You may also send your cards to him by surface mail. Contact Cliff via e-mail for more information and/or to make arrangements to check your cards: [cahrens@mywdo.com](mailto:cahrens@mywdo.com).



- EIDXA member Tom Vavra, WB8ZRL. Please note that Tom is now able to check cards from deleted entities and cards for 160 meters. Contact Tom via e-mail for more information and/or to make arrangements to check your cards: [wb8zrl@southslope.net](mailto:wb8zrl@southslope.net).

- EIDXA member Mike Nowack, NA9Q. Mike attends EIDXA meetings as his schedule permits. Contact Mike via e-mail for more information and/or to make arrangements to check your cards: [na9q@arrl.net](mailto:na9q@arrl.net).



*HEARD ISLAND 2014*

## 2012 EIDXA Meeting & Events Schedule

Look for this information on the club web-page [www.eidxa.org](http://www.eidxa.org). Meeting information on the web site is up to date to ensure everyone has timely access to the information between newsletters.

**Next EIDXA Meeting –  
Friday October 5<sup>th</sup>, 7:30  
PM, room 219C of Linn  
Hall on the campus of  
Kirkwood Community  
College. Cedar Rapids.  
Program - DX4Win  
presentation by Craig  
Fastenow, KØCF.**

Established 1975

