



# THE EASTERN IOWA DX'ER

WINTER 1990

CLUB NEWSLETTER OF THE EASTERN IOWA DX ASSOCIATION

## Club Officers

President: NU0P Steve White

Vice-Pres: WBBZRL Tom Vavra

Sec-Treas: NC00 Tom Hise

Newsletter Asst: W4NIM Bob Hill

The Eastern Iowa DX Association's Winter meeting will be held Friday the 12th of January at 7:30 pm at the REC building in Marion. The doors will open at 7:00 pm for coffee and refreshments. A BRAG table will be set up and everyone is encouraged to have some item(s) of interest to show off. Talk-in on the club repeater, W0MJN/R, 145.19 (minus 600).

The subject of the night is the Low bands, which is very appropriate for this time of the year. Three of the club members will relate their experiences on the low bands and with beverage receiving antennas.

## Minutes of the EIDXA meeting 20-Oct-1989

The meeting was held at the REC building in Marion. The meeting was called to order at 7:30PM. There were 26 members and 1 guest present. After introductions a motion to accept the minutes of the previous meeting was made, seconded and approved. Also approved was the Treasurers report.

The Membership Committee was presented a membership application for processing. KC00 volunteered to staff the Audit Committee. The President announced a get-together for W4NIM on November 17 at NASSOs. The Sunday evening Net will move to 3780 +/- on Nov 12. K0GVB will call the first Net. Club members were reminded to submit their ARRL renewals through the club treasurer to insure that the club gets the proper percentage of the dues. NU0P announced the 'DX HOG' competition for the CQWW SSB contest.

W0MJN had good news on the repeater antenna. The installation of the 4-day antenna was nearly complete. W0SR reported on DXAC activities. NU0P presented certificates to N0SM, W0EJ (in absentia) and W0IZ for high scores in the ARRL DX tests in CW, SSB and QRP respectively. Details of club competition reporting were given the members.

New Business: Officers were elected to serve during the forthcoming year. Last years officers were given another chance to get it right and were re-elected. Officers for the next year are: President, Steve, NU0P; Vice-Pres, Tom, WBBZRL; and Treasurer/Secretary, Tom, NC00.

There being no further business, the meeting was adjourned at 8:20 and the program followed.

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Attendance: WE0M, K0VM, K0GT, KZ0C, WD0AWL, K0VZR, WK0I, W0NB, AB0M, K0GVB, W0SR, W0WP, KB0SY, KC00, W0IZ, W0MJN, K0GVB, N0ICI, K0RW, N0SM, WE0U, W0PPF, WB0ZKG, NU0P, WBBZRL, NG0W. Guest: N0LAC.

TREASURERS REPORT

As of December 23, 1989

The following table has the CO and ITU zones for each Asiatic Russian Prefix. UZ, UV, UW, RZ, RW, RV may replace UA.

GENERAL FUND

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Balance Forward \$372.06  
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INCOME

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Dues Rcvd \$170.00  
Coffee Fund (OCT Mtg) 10.10  
Donation 3.00  
QST Re-Up (ABØM) 20.00  
Interest (July/Aug/Sept) 8.71  
-----  
Subtotal 211.81 211.81

\$583.87

EXPENSES

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Postage October Newsletter \$ 9.50  
Refreshments October Mtg 6.98  
QST Re-Up (ABØM) 18.00  
Award Materials 17.94  
Contribution to Club Bouvet 103.45  
-----  
-\$155.87 -155.87

General Fund Balance \$428.00

REPEATER FUND

=====

Balance Forward \$229.90

NO CHANGE

Repeater Fund Balance \$229.90

UA8T 18 32  
UA8V 18 32  
UA9A 17 30  
UA9C 17 30  
UA9F 17 30  
UA9G 17 30  
UA9H 18 31  
UA9J 17 21  
UA9K 17 21  
UA9L 17 30  
UA9M 17 30  
UA9O 18 31  
UA9Q 17 30  
UA9S 16 30  
UA9U 18 31  
UA9W 16 30  
UA9X 17 20  
UA9Y 18 31  
UA9Z 18 31  
UA0A 18 32  
UA0B 18 22  
UA0C 19 34  
UA0D 19 33  
UA0F 19 34  
UA0H 18 22  
UA0I 19 24  
UA0J 19 33  
UA0K 19 26  
UA0L 19 34  
UA0O 18 32  
UA0Q 19 23  
UA0S 18 32  
UA0U 18 33  
UA0W 18 32  
UA0X 19 25  
UA0Y 23 32  
UA0Z 19 35

For Sale: By Doug WØSML  
Hy-gain Monobanders  
103BAS 3 ele 10M \$ 50  
115BAS 5 ele 15M \$150  
204BAS 4 ele 20M \$175  
or all three \$350

Collins 75S3B with CW  
mechanical filter. Hand  
built by Collins design  
engineer. OBO \$250 or  
trade for 2M gear.

The QSL route for XW8KPV is JH1AJT.  
His address changed in the '90 Callbook  
to the following:

YASUO MIYAZAWA  
PO BOX 8 ASAHI  
YOKOHAMA  
JAPAN

Thanks to KØGVB, NUØP and NCØØ for  
material used in this newsletter.

membership list 1 Jan 1978

call	stat	p	d	name
KU0A	FULL	N.		Nelson Moyer 28 Ealing Dr. Iowa City, Ia 52246 319-351-8775 home 319-335-4500 work
K0AL	INACT	Y		Al Culbert POB 306 Charles City, Ia 50616
W00AWL	FULL	Y		Terry Cellan 703 Lincoln St. Ainsworth, Ia 52201 319-557-3681 home 319-648-2391 work
W00B	FULL	Y		Larry J. Newby P.O. Box 185 West Burlington, Ia 52655 319-752-8700 home 319-754-4692 work
W00X	FULL	N		Lee L. McKee 1620 Briarwood Lane Muscatine, Ia 52761 319-263-0398 home
K20C	FULL	Y		Jim Bohnsack 1169 Rainbow Dr. Waterloo, Ia 50701 319-273-7189 home
W00EJ	FULL	Y		Wade Walstrom 7431 Macon Drive NE Cedar Rapids, Ia 52401 319-395-8982 home 124-311 as
W00FY6	ASSOC	N		Rick Hadley 115 Scenic Dr. Vinton Ia 52349
K00GT	FULL	Y		Gary Toomsen 2730 Tower Dr. Cedar Rapids, Ia 52401 319-395-9329 home 137-122 as
K00VB	FULL	Y		Gary Ernst RR 2 West Branch, Ia 52358 319-643-2287 home
KF0H	FULL	Y		Jim Harvey 819 N. Main St. Goldfield, Ia 50542 515-825-3323 home
KJ0H	FULL	N		John Schwandke RR 1 BOX 97 Ainsworth Ia 52201
N00H	FULL	Y		Jack Muckler 2084 Eastern Blvd. SE Cedar Rapids, Ia 52403 319-362-3462 home
N00HJ	ASSOC	N		David Corio 38 Leisure Blvd. NE Cedar Rapids, Ia 52402 319-395-7973 home 319-395-0462 work
W00I	FULL	Y		Terry Parker 535 Sierra Dr Burlington, Ia 52601 319-753-1557 home 319-753-8591 work
K00IR	FULL	N		Clark Pantel 1610 Hershey Ave. Muscatine, Ia 52761 319-263-9150 home 319-263-6141 work
K00INR	FULL	N		Tom Taylor RR 1 Shell Rock, Ia 50670 319-885-4400 home 319-236-1500 work
W00IZ	FULL	Y		Dale Repp 1618 Texas Ave. NE Cedar Rapids, Ia 52402 319-393-6724 home
K00JGH	FULL	Y		Glen Kesselring RR #7 Box 160 Ottumwa, Ia 52501 515-934-5320 home
NN0L	FULL	N		Ron Borkgren 1106 East 2nd St. Anamosa, Ia 52205 319-462-4113 home
AB0M	FULL	Y		Vern Lang 110 E. 2nd St. Muscatine, Ia 52761 319-263-2697 home 319-263-5041 work
W00M	ASSOC	Y		Tom Gordon 6704 Brentwood Dr. NE Cedar Rapids, Ia 52402 319-373-8757 home 319-651-7219 work
W00MJN	FULL	Y		Joe Finkstein 2210 Empire St. Marion, Ia 52302 319-377-6573 home 319-395-2294 work 106-124 as
NK0N	FULL	Y		Orville Duecker 226 Southcrest Waterloo, Ia 50702 319-296-2390 home 319-233-3569 work
W00NB	FULL	Y		Jim Livengood R.R. 1, Ferre's Lane Burlington, Ia 52601 319-752-9310 home 319-752-2701 work
W00NIM	FULL	N		Bob Hill 2510 White Eagle Trail SE Cedar Rapids, Ia 52403 319-366-3975 home 319-393-5115 work
NC00	FULL	Y		Tom Hise PO Box 104 Shellsburg, Ia 52332 319-436-7706 home 124-115 as
NU0P	FULL	Y		Steve White 3820 Sanden Rd. NE Cedar Rapids, Ia 52401 319-393-4547 home 319-395-4641 work 153-260 as
W00PPF	FULL	Y		George Carsner 411 Terrace Rd. Iowa City, Ia 52245 319-338-1601 home 319-351-5033 work
KC00	FULL	Y		Jeff Russell 2125 Linmar Dr. NE Cedar Rapids, Ia 52402 319-363-4139 home 319-395-4664 work 124-211 as
KK0R	FULL	N		Bob Tillman P.O. Box 1 Eldora, Ia 50627
N4RR	FULL	N		Roger Hoffman 17215 Timber Drive Sterling, Il 61081 615-625-6647 home
KD0RT	FULL	N		Brad Farrell 1401 Greenwood Dr Ottumwa, Ia 52501 515-684-7768 home 515-682-4535 work
K0RW	FULL	Y		John Lenahan 923 N. 9th St. Burlington, Ia 52601 319-753-6883 home 319-752-2731 work
N00SM	FULL	Y		Steve Miller Route 6 Box 180 Ottumwa, Ia 52501 515-684-4753 home
W00SML	FULL	N		Doug Byal 4431 Deer View Rd, NE Cedar Rapids, Ia 52402 319-393-2974 home 319-395-4283 work 153-200 as
W00SR	FULL	Y		Jim Spencer 3712 Tanager Dr. NE Cedar Rapids, Ia 52402 319-393-7353 home 319-395-2305 work 124-115 as
KB0SY	FULL	Y		Rick Cordle 515 20th St. SE Mason City, Ia 50401 515-424-8493 home
W00U	FULL	Y		George Gruenther 1106 S. Leebrick Burlington, Ia 52601 319-753-1461 home 319-753-6253 work
K00UYH	FULL	Y		Timothy Allan 732 Wildwood Rd. Waterloo, Ia 50702 319-234-4215 home 319-292-8796 work
W00UZ	FULL	N		John Nelson 3109 Terry Dr. SE Cedar Rapids, Ia 52403 319-365-4432 home
NY0V	FULL	Y		Tom Vinson 10211 Hall Road NE Cedar Rapids, Ia 52401 319-393-8087 home 128-105 as
K00VAA	ASSOC	N		Ralph Gearhart 5040 Broadview Dr SE Cedar Rapids, Ia 52403 319-366-0158 home 319-365-9461 work
K00VM	ASSOC	Y		Al Groff 1446 Council St. NE Cedar Rapids, Ia 52402 319-393-8134 home 319-395-4666 work 124-211 as
W00VX	INACT	N		Dave Jaksa 626 Torrey Pines Ln Garland, Tx 75044
K00VZR	FULL	Y		Tom White RR#2 Jesup, Ia 50640 319-827-6738 home 319-334-7166 work
NG0W	FULL	Y		Keith Erickson 1810 Hillside Dr. NW Cedar Rapids, Ia 52405 319-396-8510 home 319-398-3551 work
NX0W	ASSOC	N		Dan Veerhusen 1601 48th St. NE Cedar Rapids, Ia 52402 319-393-6726 home 319-395-4874 work
W00WP	FULL	Y		Tom Lindgren 1260 13th Ave. Marion, Ia 52302 319-377-4279 home 319-395-1953 work 107-110 as
KE0Y	FULL	N		Tom Kramer 905 LeRoy Muscatine, Ia 52761 319-264-3259 home
KF0Z	FULL	N		Jan Clute 320 College Blvd. Mount Vernon, Ia 52314 319-895-6635 home 319-927-2143 work
W00ZKG	FULL	Y		Chuck Dennis 400 E. Vine Toledo, Ia 52342 515-484-4837 home
W00ZRL	FULL	Y		Tqa Vavra 682 Palisades Access Rd. Ely, Ia 52227 319-848-7604 home

DUES DUES DUES

From

The new By-Laws require the payment of Dues by the end of the second regular meeting of the club year or the individual will be placed on probation. NC00 will be available at the meeting to receive dues or they may be mailed to him.

Please don't force the President to put anyone on probation.

10 Years Ago - Jan 1980

BY Rumors abound about who will activate long silent China and when. ZL1AM0 was one of the names rumored.

60 604LS was on briefly giving out this rare one. Later, he was found to be operating from a boat in the harbor.

VK0 The first of the rumors about RARE Heard Island started. It was Feb '83 when it finally happened.

A7 A7XAH, A7XD and A7XA on SSB and DF4NW/A7 on CW keep this country off the need lists.

KH5 K6LPL/KH5 and WA2FIG/KH5K were active although curtailed when the plane carrying them to Palmyra crashed attempting to land. One operator had to be air lifted out.

Rumors about XZ and ZA persisted then as they do now.

3B6 3B8CF activated this one signing 3B7CF, mostly on CW.

FB8Z0, Amsterdam, VP8VN, South Georgia, LU3ZY, South Sandwich, FR7AC/G, Glorioso, 3VBAA, Tunisia, and A51PN filled log pages for the deserving.

THE FRANKFORD RADIO CLUB NEWSLETTER

Reward Offered! A reward of 5,000 microfarads is offered for information leading to the arrest of Hopalong Capacity. This unrectified criminal escaped from a Weston primary cell where he had been clapped in ions. He is charged with the induction of an 18 turn coil named Millie Henry, who was found choked and robbed of valuable joules. He is armed with a carbon rod and is a potential killer. He is also accused of driving a D.C. motor over a Wheatstone Bridge, and refusing to let the band pass. The Electromotive Force spent the night searching for him in a magnetic field where he had gone to earth. They had no success and now believe that he has returned ohm via a short circuit. He was last seen with his friend Eddy Current, riding a Kilocycle. Eddy was playing a harmonic. Charges against him to be under Ohm's Law.



- Any of your cards here????????

From the desk of the President

I hope Santa was good to everyone and left a new TS-950 under your tree or placed a new antenna on your tower for you as he was cruising by. Apparently I wasn't a good boy this year since none of those things happened to me but I am looking forward to the New Year and have already started thinking about my New Year Resolutions. In fact I made a list this year:

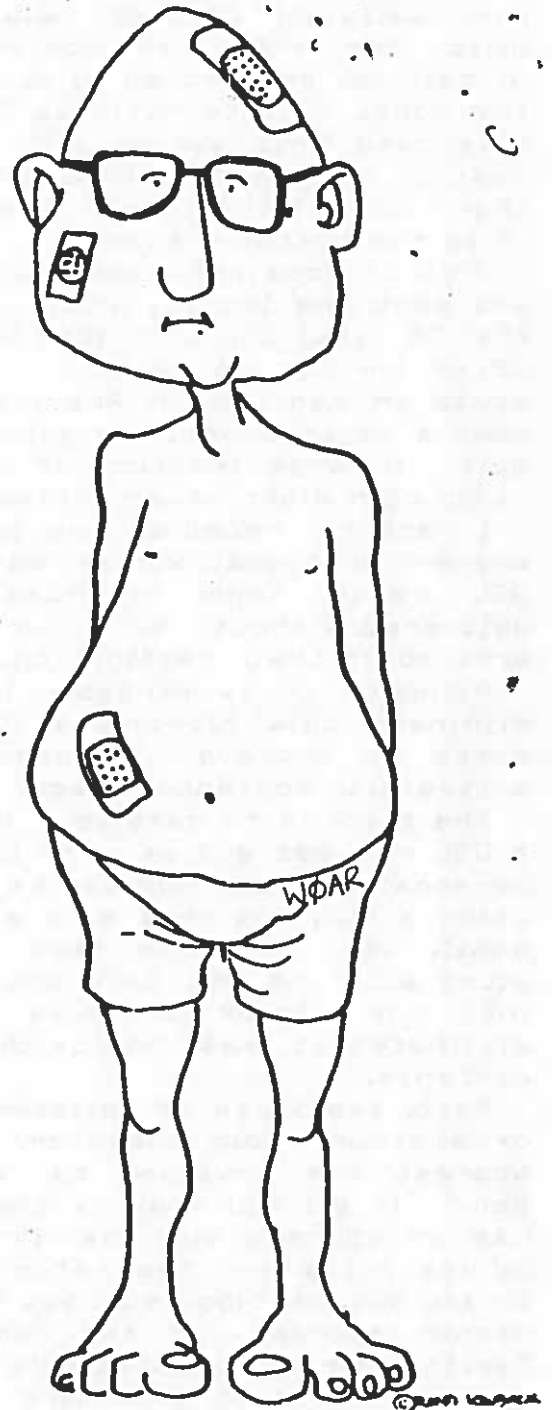
1. Work more dx (this must be number one on every hams list)
2. Make more QSO's than I did last year in the contests
3. Keep the shack clean (this I rarely do but keeps the XYL happy)
4. Put up bigger antennas (this won't keep the XYL very happy but it does wonders for me)
5. Help some one do items 1,2 or 4. (Your on your own for item 3)

Although this Resolution list is somewhat different than the one I show the XYL you can be sure that Resolution number 3 is on that list. This is my list and I'm sure that some of you have your own and would be worth reviewing at the next club meeting. Bring your resolution list to the next meeting and share it with all of us, if your priorities are a bit confused I'm sure you can get that sorely needed guidance and counseling.

The DX hog competition was won by KØGT Gary Toomsen. He had 50 band stations worked! Gary used a very simple but effective technique....work the big contest stations on every band you can hear them on. Good job Gary and you win the "DX HOG" T-Shirt.

The program at the next meeting will feature KØGT discussing "Low Band Antennas That I Have Tried." No one has tried more of these than Gary and he has volunteered to share some of his experiences with us so we can take advantage of all his hard earned knowledge. WBØZRL and NCØØ will also be discussing "The Proper Care and Feeding of Beverage Antennas." These should both be interesting discussions and I hope to see you all there.

73 de Steve NUØP



MEGA HERTZ

Among DXers' greatest frustrations is the problem of stolen mail. In many parts of the world, underpaid postal workers have learned to recognize that the small envelopes with the telltale bulge of the folded envelope inside and weird combinations of letters and numbers in the address and/or return address (i.e. callsign) contain valuables, including US \$1 bills. One of the many workers who handles this type of mail may be tempted to divert the letter, and keep the money of International Reply Coupons (IRCs). In this case that worker will more likely destroy the rest of the letter, including the QSL card, rather than risk getting caught by putting the remains back in to the postal system.

This obviously causes problems both for the DXer who sent the letter, which is not answered, and for the DX station, who gets a reputation as a bad QSLer through no fault of his own. The problem is acute in many South American countries, especially when a major DXpedition generates a large volume of mail. A large fraction of the mail addressed to a radio club might never arrive, for example.

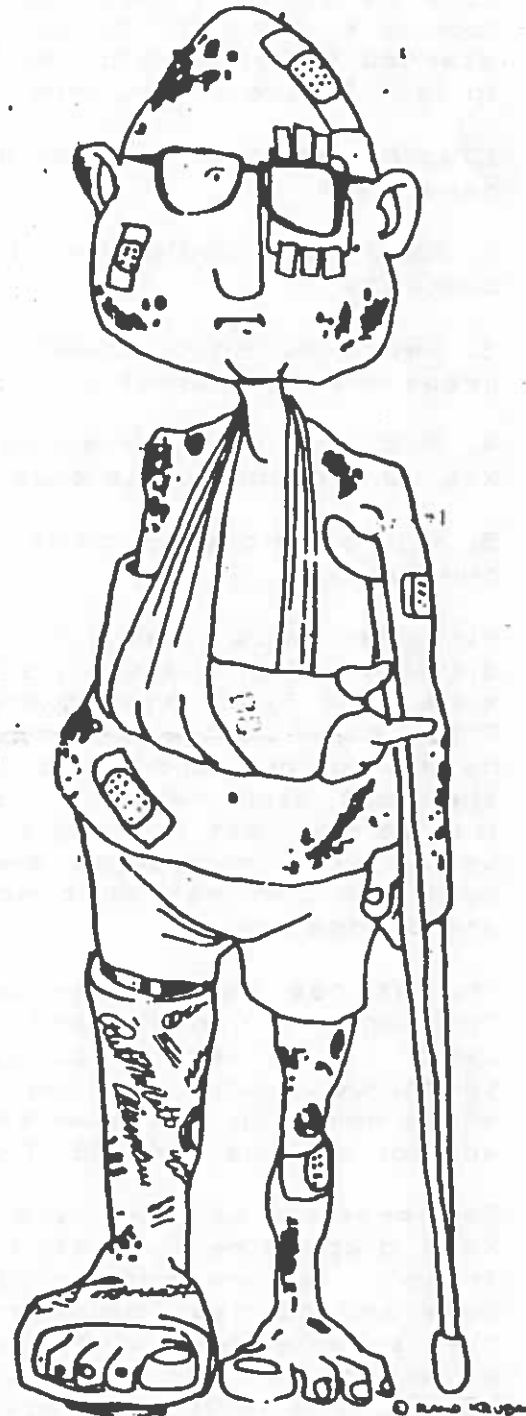
I recently received two letters describing cases where the postal worker was a little more honest. QSL cards sent to Russia and Djibouti were delivered without the dollar bill, but at least they arrived at their destination.

Although it is probably impossible to completely eliminate this rip-off, a DXer can at least take steps to improve the odds that his letter will arrive with contents intact.

The trick is to make your letter look as little like a QSL request and as much like a business letter or personal correspondence as possible. This means using a #10, business-size envelope rather than the small, QSL card-size ones. The return envelope along with the QSL card and the US \$1 (or IRCs) fit into the larger envelope without folding, which eliminates at least one of the indicators of valuable contents.

Next, avoid use of callsigns or other designations of amateur radio operator. In other words, don't address the envelope to "amateur radio operator Ben." If all you know is the operator's first name, use an address such as "Mr O.M. Frank." The same advice holds for the return address. One of the locals has had good success by using a "Mr. and Mrs." return address, or the name of a business firm. Typing both the DX station's address and the return address makes it look more like an official letter, and less like a QSL request.

The use of opaque, check-mailer envelopes can prevent anyone from seeing the money inside when the envelope is held up to a light. If you can't find these large, opaque envelopes at your local stationery store, write to Writewell Co., P.O. Box 6112, Indianapolis, IN 46206. Their envelope #W131 is a large, opaque, self seal one with imprinted return address, at \$21.95 plus \$3/.95 postage for 100. The price is well worth the improved QSL return rate.



**GIGA HERTZ**

# NEC ANALYSIS OF 80 METER ANTENNAS

Lew Gordon, K4VX/0

Reprinted from *THE BLACK HOLE*, The Journal of the Society of Midwest Contesters

The late Tom Peruzzi, W4BVV once remarked, "its a good thing we have the eighty meter band, or we contesters would have little to talk about!" For those hams who are unfamiliar with W4BVV, Tom's super DX Contest station was a dominate force from the early 1960s until his untimely death from leukemia three years ago. His antenna farm consisted of massive arrays for the high bands, and even included stacked 3 element yagis for forty meters. Like most of us, however, he was forced to use wires on 80 meters. I recall during those years at monthly at meetings of the Potomac Valley Radio Club, the subject of improving signals on 80 meters invariably arose as a topic for informal discussion. These discussions were also a daily topic on the PVRC repeater as we mobilized to work in the Washington area traffic. Most of us dream of huge, full sized, three element rotary Yagis on 250 foot towers, but inevitably the reality of life forces us to forget those ideas.

Most amateurs who have been contesting for ten or more years have tried practically all types of wire antennas for eighty meters, usually with varying degrees of success. What "plays" one year seems to fall short the next season and its back to the calculator. In recent years, computer modeling of antenna structures has provided the opportunity to explore yagis, quads, delta loops, dipoles, and inverted vee antennas without the frustration of actually erecting them and comparing signals to produce confusing and subjective evaluations at best. In addition, the deleterious effect that nearby tower structures have upon the patterns of vertically polarized antennas appears to be much greater than was once thought. With this in mind, I have

focused these analyses only toward horizontally polarized antennas.

It is the intent of this article to provide a comparative computer derived evaluation of typical horizontally polarized antennas such as the simple delta loop, dipole and inverted vee at a height of 112 feet for the intermediate contest station, and also provide comparisons of bigger arrays at 160 feet for those stations in the "super" category. All analyses have been performed using the Numerical Electromagnetic Code, NEC-2 program developed by Lawrence Livermore National Laboratory. The radiation patterns are for a frequency of 3.51 MHz and assume a smooth earth with a dielectric constant of 4 and conductivity of 5.0 m-Siemens/meter. This is typical of mid-west farmland.

Figure 1 shows the NEC derived plots in the direction of maximum radiation for (1) a resonant half wave dipole at 112 feet; (2) an inverted vee dipole (120 degree) with its apex at 112 feet; (3) an equilateral delta loop with the horizontal side at 112 feet (pointing down); and an equilateral delta loop suspended (pointing up). These are antenna types which are in typical use by stations who compete in both DX and domestic contests. Two of the antennas require only a single point of suspension while the other two require two supporting structures. It is interesting to note that with the exception of takeoff angles above 55 degrees, the often highly touted suspended delta loop (4) is the poorest performer of the four, while the often maligned simple inverted vee (2) compares very well with both the point down delta loop and the horizontal dipole. These NEC results appear to indicate that a simple half wave suspended inverted vee is, for all prac-

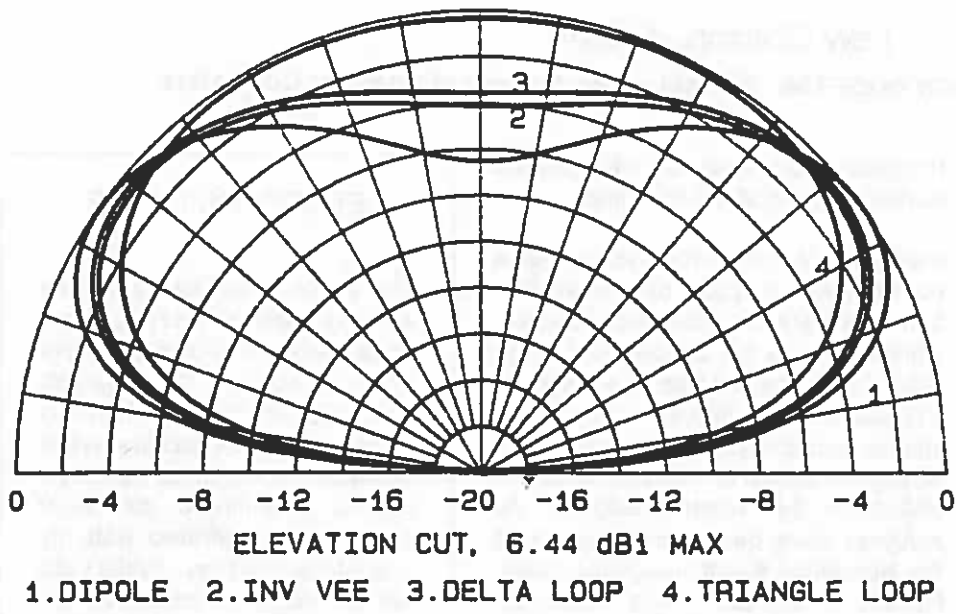
### EDITOR'S NOTE

This article on 80 Meter antennas was especially interesting to me since I was just beginning to use my own copy of the MiniNEC program. The data for the plots shown with the article were generated using Brian Beezey's version of MiniNEC, the actual plots were generated with my own plotter routines. While I did not get exactly the same numerical answers as did K4VX, my results show the same general trends. The two major differences are with the triangle loop and 8JK array. In both cases, my results are slightly better than that shown by K4VX. This is likely due to the actual dimensions used in the analysis. Although K4VX states that antenna dimensions are given in the article, they were in fact not. Thus it was my own guess as to the actual dimensions used in Lew's analysis.

While MiniNEC allows the user to select ground characteristics, I chose to leave the ground characteristics the same as Lew used although they are considerably better here in the Dallas area than in the Midwest.

Finally, the azimuth plots shown are assumed to be symmetrical thus allowing only half to be shown.

K5NW, editor.

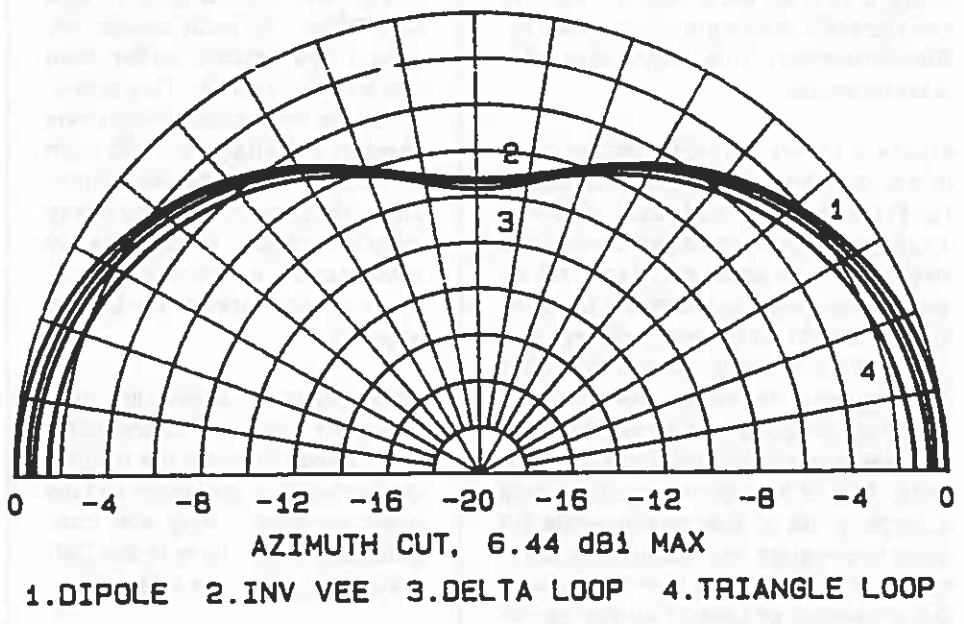


a 200 tower and 32 foot suspension boom present. With the exception of side lobe perturbations, very little difference was noted in forward gain. Thus, to reduce computing time, all data assumes no tower or boom present.

Figure 2 shows the NEC results of the various antennas. From what was shown in the first analysis, it probably comes as no shock that the inverted vee dipole remains a very good performer compared to a horizontal dipole. The surprise is, however, that the 2 element inverted vee yagi is significantly better than the 2 element delta loop array or the 4 section 8JK array at take off angles below 35 degrees. This means that stations now using fixed quad arrays (K4VX included) could conceivably improve their signals on the long haul by resorting to the simpler inverted vee style yagi. Also evident from the data is that dipoles and inverted vees perform better when they are over one-half wavelength above ground. This should not be a surprise!

In the interest of curiosity, a full sized two element yagi on a 38 foot boom at 160 feet was also modeled. Its directivity was less than 0.5 dB better at a 25 degree takeoff angle than the inverted vee yagi above; however, its plot is not included. Another interesting discovery was that there appeared to be very little difference in performance between a 120 degree and a 90 degree included angle inverted vee. Actually, the gain increased slightly for the 90 degree case as the radiation resistance was reduced. This means that the angle of the tie down ropes for element support is not critical at all.

As the winter winds have taken their toll of the reflector element on the K4VX 80 meter delta quad fixed on Europe, the repair effort will now be to replace it with a two element inverted vee yagi array. I plan on using forced dipole construction for the driven element to raise the NEC predicted 16-18 ohm radiation resistance by a factor of four



tical purposes, as good as its more elaborate sisters at a height of 112 feet above average ground.

The next NEC analysis is for (1) a horizontal dipole; (2) an inverted vee dipole; (3) a 2 element delta loop array; (4) a 4 section 8JK array with inverted

vee type suspension (120 degrees); and (5) a 2 element (driven element/reflector) inverted vee yagi array (120 degrees). All antennas are suspended from 160 feet. Spacing between all elements is 32 feet. The delta loop array was first modeled assuming no supporting structure, and later with

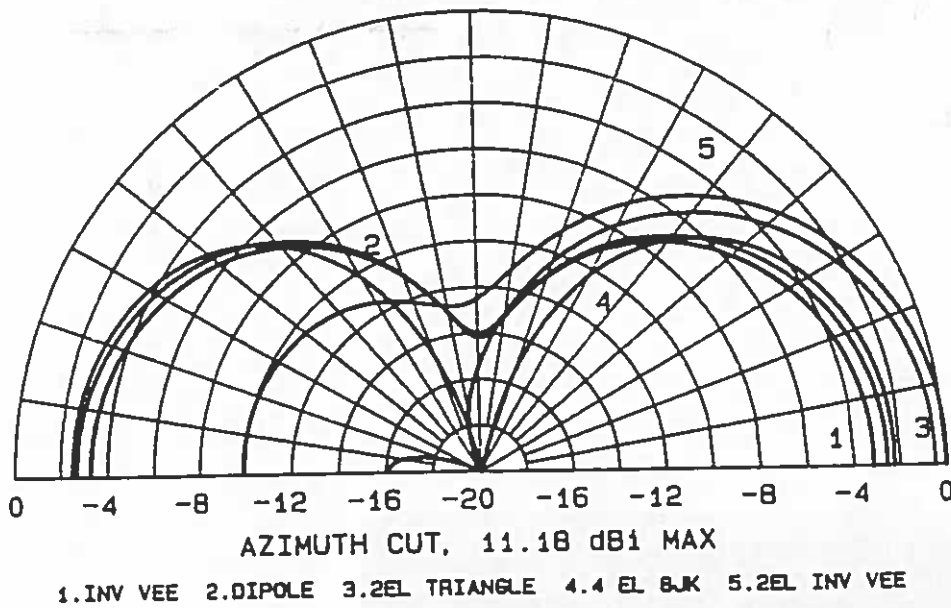
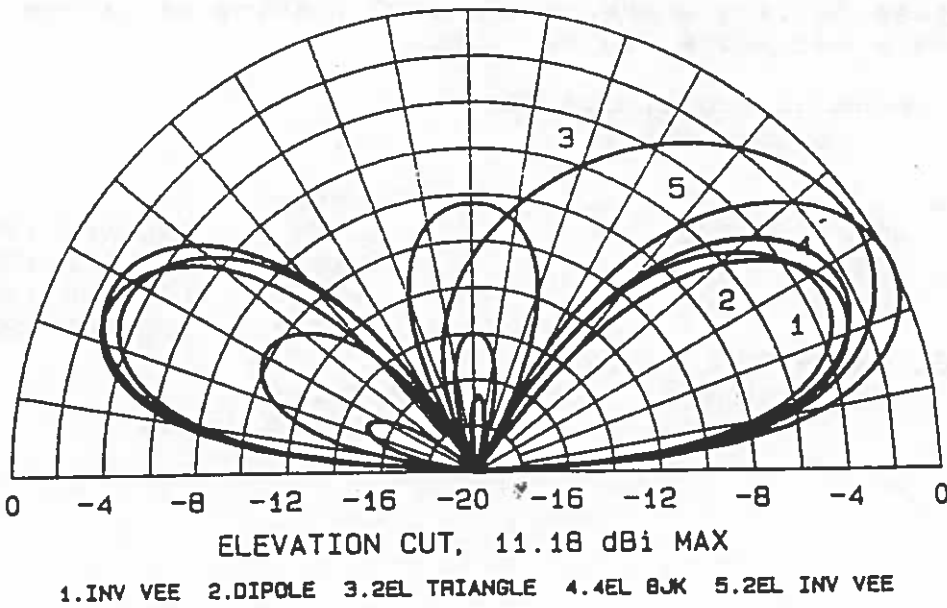


which will offer a good match to 75 ohm CATV hardline. This should also broaden the operational bandwidth of the antenna. I have included the dimensions used for all calculations in Table 1. They should serve as a good starting point for anyone attempting to build one of these antennas.

As I stated at the beginning, most contesters are never totally satisfied with their 80 meter antenna systems. If you are one of the fortunate ones who firmly believe they have the ultimate 80 meter antenna, I say "Congratulations!" If not, I hope the data in this article has shed some light upon the confusion over the options available.

In summary, these results indicate that higher is better but of course we knew that. If you can only put up a single wire dipole or loop antenna, stick with the inverted vee. It is every bit as good as those users over the years have been telling us that it is. If you have a high, sturdy tower, you could gain a small advantage by mounting a 30-35 foot boom and construction a wire inverted vee type yagi rather than a delta loop array.

Hopefully, the new inverted vee array that I plan to erect will serve in the interim until I win the Missouri lottery and finally erect that full sized element rotary 80 meter yagi at 250 feet!



Thanks to the Kansas City DX Club Newsletter for the 80M antenna article and cartoons. The mailman cartoon is from Micro Cornucopia.

Remember that this year each of us must be listed in the yearly DXCC listing or submit a score in one of the four major contests to maintain full membership in the club. To help the President capture this data, each of us can submit a note or packet message telling where in the DXCC listing we can be found, or which contest summary our score can be found.

From Nov, Dec, Jan QST  
DXCC Updates

Mixed		CW		40 Meter	
W0EJ	305	W0EJ	253	W0SR	158 (nr 119)
NU0P	107	WB8ZRL	291	WB8ZRL	156 (nr 120)
WB8ZRL	313	K0VZR	229	W0IZ	149 (nr 149)
WB0B	190			K0IIR	105 (nr 180)
K0JGH	316	NEW HONOR ROLL MEMBERS		80 Meter	
K0RW	228	K0GT (Phone)		WB8ZRL	124
SSB					
W0EJ	262				
WB8ZRL	308				
WK0I	205				

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682 Palisades Access Rd.  
Ely, Iowa 52227-9717

Jim Spencer W0SR  
3712 Tanager Dr. NE  
Cedar Rapids, Ia 52402