

# Collector & Emitter

A CORA Publication

**February 1995**

Volume 21, Number 02

Issue 240

50¢

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**COLLECTOR AND EMITTER'S 20<sup>TH</sup> ANNIVERSARY  
AS A CORA PUBLICATION**

**A Look Into The Past: 20 Years Ago**

**DX Packet Cluster Map**



**Power Line Interference Steps to Take?**

**EARS/CORA Scholarship Applications**

**Can You Remember When?**

## Collector & Emitter

Harold C. Miller, KB1ZQ

Editor

Linda G. Miller, N1LPN

Circulation Manager

## Central Oklahoma Radio Amateurs, Inc.

President: Chuck Wilhite, K5NK

Vice President: John Guida, NJ1V

Secretary: John Brassfield, N5SAM

Treasurer: Perry Jenkins, KB5TOT

Dear Subscriber:

PLEASE help us keep your information up to date. What time, where, when, who are your officers, editors, and their phone numbers. Check your entry, it can be changed. If there appears to be a mistake, check with your club officials. We can't do a thing about it if you don't. Below is a sample label:

4	95/12	2
DOE, JOHN E.	KA5ABC	
1234 SW 56th STREET		
RADIOVILLE, OK	74321	

The "4" means Autopatch Club, "95/12" means the year/month dues expire. The "2" is for postal zones.

Dear Secretary / Treasurer:

When you want a change of any sort to your membership, you must completely fill out a subscription slip. Watch for the date you received their funds and the date the subscription expires. Have your slips, or list of deletions submitted by the 22nd of each month. If there is anything about C&E subscriptions you need to know, please contact us.

February 1995

VOL. 21, No 02, Issue 240

## Collector and Emitter

(USPS 116-150)

is published monthly by CORA, Inc.  
4216 Spiva Drive Del City, OK 73115-4424. Second Class postage paid at Oklahoma City, OK.

Subscription rates:

CORA Member \$4.80 per year

Paid subscription \$7.00 per year

Postmaster:

Send address changes to;

Collector and Emitter

P. O. Box 95942

Oklahoma City, OK 73143-5942

<b>1. Aeronautical Center ARC</b> Meets: 1930L, 1st Thursday, FAA, S. MacArthur, OKC Pres: Dick Russell, KJ5VV 733-2141 Sec/Tr: Brad Nelson, KJ0W 793-9470 VP: Chuck Bryant, KB5ZVZ 737-0423 Editor:	<b>11. Edmond Amateur Radio Society</b> Meets: Odd Months, 1400L, 3rd Sunday, Edmond EOC, Even Months, Dinner, 3rd Friday Pres: John Thomason, WB5SYT 340-1798 VP: Richard Winnard, KJ5QU 840-4237 Sec: Ken Stepp, N5DBM 341-7651 Treas: Sue Snyder, N5VWI 341-8753 Editor: Richard Winnard, KJ5QU 840-4237
<b>2. Oklahoma Central VHF ARC</b> Meets: 1100L, 3rd Saturday, Neighbor's Resturant 3401 N. Classen Blvd, OKC Pres: Jackolyn Olsen, KA5ENU VP: Ken Eason, KP5JS Sec: Joe Buswell, K5JB 732-0676 Treas: Ellard Foster, W5KE 789-6702 Editor: Joe Buswell, K5JB 732-0676	<b>14. Cimmaron Amateur Radio Assn.</b> Meets: 1930L, 1st Thursday, WX5Y Playhouse 827 S. 13th, Fairview Pres: John Medley, N5WVU VP: Kenneth Monahan, KB5SOM Sec: Dennis Painton, WK5V 764-3599 Treas: Nadine Painton, N5FMH 764-3599 Editor: Kenneth Monahan, KB5SOM
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<b>4. Oklahoma City Autopatch Assn.</b> Meets: 1930L, 3rd Tuesday, Salvation Army Bldg N W. 50th and Penn, OKC (Back Door) Pres: Brad Nelson, KJ0W 793-9470 VP: Mike Fields, KB5WIC 720-9123 Sec: Perry Jenkins, KB5TOT 354-5075 Treas: Cheryl Brassfield, KB5WQR 685-8070	<b>16. Edmond Amateur Radio Club</b> Meets: 1900L, 2nd Monday, Various Locations Pres: Mark Northcutt, WD5DYI 755-4672 VP: Wendell Cochran, WB5ISO 396-8224 Sec/Tr: Kay Northcutt, WD5DYJ 755-4672 Trustee: Dennis Orcutt, WB5ISN 340-0034
<b>6. Altus Association</b> Meets: 2nd Thursday, Check Daily Net on 146.79 / 146.82 for current location. Pres: George Mayetko, AA1IJ 266-3357 VP: None Sec/Tr: Mike Brown, KC5AWB 481-6665 Editor: Mike Brown, KC5AWB 481-5928 Hosp: Vallie McClain, KC5AHX 477-3357	<b>Support Ham Radio</b>  <b>Do You Know of A Club That Does Not Belong to CORA? Let's Make CORA Grow!!!!</b>
<b>9. Wheatstraw Amateur Radio Club</b> Meets: 1430L, 2nd Sunday, Location Varies Pres: Leo Peil, WZ5H 886-2998 VP: Jimmie E. Payne, N5VDY 233-4215 Sec/Tr: Joe Garland, WA5FLT 893-2660 Editor: Ralph Wilder, WA5PFK 623-5421	<b>Central Oklahoma Radio Amateurs</b> Meets: 1930L, 4th Tuesday, Salvation Army Bldg N.W. 50th and Penn, OKC (BackDoor) Pres: Chuck Wilhite, K5NK 721-4926 VP: John Guida, NJ1V 340-6518 Sec: John Brassfield, N5SAM 685-8070 Treas: Perry Jenkins, KB5TOT 354-5075 Editor: Harold Miller, KB1ZQ 672-7735

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# Collector and Emitter, February 1995

PLEASE PRINT

I	NAME		Call
Address			Apt
City	State	Zip	
Telephone	Do hereby transmit my dues of		
\$	X	Total Paid	
	YEARLY AMOUNT	NUMBER OF YEARS	
In the (Club Name)			
Month and Year ending:	/	Date Paid:	/
	YEAR/MONTH		YEAR/MONTH
\$4.80 OF YEARLY AMOUNT IS FOR A SUBSCRIPTION TO CORA'S COLLECTOR AND EMITTER			

Member's Signature  
 NEW RENEW DROP CHANGE-OLD ZIP/CALL

## CENTRAL OKLAHOMA RADIO AMATEURS

Minutes of the January 24, 1995 meeting

The meeting was called to order at 7:30 p.m. by Chuck, K5NK. Six officers were present with 5 clubs represented and a total of 14 people attending the meeting.

The minutes of the December 27, 1994 meeting were accepted.

A treasurers report for the month of Nov and Dec was presented by Perry, KB5TOT and accepted.

C&E: Hal, KB1ZQ reports the forth quarter of 94 statements are in the mail and are still needing articles for the Feb issue. Linda, N1LPN reported the data base still is improving with only 8 returns in January. A recommendation was made that the \$.50 charge for return be charged back to the sponsoring club, was postponed until March so sponsoring clubs can complete their address check.

Chuck, K5NK made a trip to Altus and met with them to explain to them the officer and circulation changes that have occurred in CORA.

Ham Holiday 95 - Chuck, K5NK reported that he and Perry, KB5TOT, John, N5SAM and Mike, KB5WIC went to the fairgrounds office to sign the contracts for the building. The contracts weren't ready but it was confirmed that the building is reserved. Perry and Jerry, KJ5KP, pre-registration chair, recommended a separate PO Box for pre-registration tickets. A MOTION was made and accepted. The flea market tables are set at \$10 and dealer tables are \$50 for first table and \$40 for extras. The budget for main prizes was recommended at \$2000. A MOTION was made and accepted. John, N5SAM will secure a PA system for drawing area Saturday afternoon. Lee, KA5WIS presented the scholarship forms used by EARS and CORA and reminded us the deadline is March 27. The 146.67 machine is to be the talk-in.

The Twentieth Anniversary edition of the C&E is in February. Special memories or articles are needed.

Meeting adjourned at 9:05.

John Brassfield, N5SAM  
 CORA Secretary

Please fill out all the information on the slip. The Dates and Amount paid is required for Postal Regulations.

Telephone numbers are only used in the event of a question on your membership or subscription to Collector and Emitter.

Signatures are not required but requested to verify that you are aware of you subscribing to the C&E.

Thank you for your assistance

## Letter To The Editor

Just wanted to include a note and thank you for salvaging a worn out look and making the C&E into a great looking publication.

I know from experience, what it takes to do this month in and month out. I wasn't really against running that "skier" on the cover for sure and as it turns out now, we have a really nice publication that everyone can be proud of.

It's too bad this type of work doesn't go state wide, where we can read all of the club's news.

Once again, thanks and 73.

Keith, KB5FCI  
 Member of S. C. A. R. S.

All articles and items for print in *Collector and Emitter* are subject to editing, to correct obvious spelling, punctuation and grammar errors. Also to maintain a set standard through out the publication.

Send articles to Collector and Emitter 4216 Spiva Drive Del City, OK 73115-4424. Please include a hard copy with any computer disks. Or on packet send them to KB1ZQ @ K2GKK-4, 145.05 MHZ. Thank you for your assistance.

*The Editor*

## A Look into the Past : 20 Years ago

**FEBRUARY 1975** Central Oklahoma Radio Amateurs, Inc.

Officers of CORA:

President: Carl Freeman, WA4AQW

Vice President: Ken Kendrick, WB5ECJ

Secretary: Ray Peters, WB5BTT

Treasurer: Jim Jones, K5PER

Clubs: Aeronautical Center ARC, Inc.; Oklahoma City VHF ARC, Inc.; Mid - Oklahoma Repeater, Inc.; and Oklahoma City Autopatch Association, Inc.

### CORA: WHICH WAY FROM HERE?

The short ten month history of CORA is marked by a number of remarkable achievements, including sponsorship of Oklahoma Ham Holiday and a consolidated publication for the Oklahoma City Amateur Radio Community. These achievements were possible because CORA has operated on the theory that the best way to get something done is by the contribution of time and talent by a large number of people, each doing a small job contributing to the whole effort. CORA's past achievements is proof that this theory works.

Today, the future of CORA is in question. Why, because there seems to be a feeling of apathy among Oklahoma City amateurs. It all comes down to the general feeling that "I'm all for what is planned, but don't expect me to do anything to help get the job done."

The January 10th meeting of CORA was most important with key agenda items being the election of officers for the coming year, completion of final plans for this publication, and making detail arrangements for this years Oklahoma Ham Holiday. Much could have been accomplished, but the meeting turned out to be a bust...only five persons were present (WA5NF, WA5HXL, WA5FWD, WA9FDO, and WA4AQW). None of the director members from the supporting clubs attended and only one of the four officers was present. Because of the poor attendance little was accomplished and the election of officers was delayed until the February meeting.

The next CORA meeting , which will be held on February 14th at 7:30 PM at the Red Cross Center, will be a turning point...CORA will continue to function for the good of amateur radio in our community, or the organization will fold for lack of interest. Which way CORA goes will largely depend on you. What are you going to do?

HELP!

This first edition of *CORA Collector and Emitter* is admittedly a little rough in spots. Your suggestions on how it can be improved, and your input of newsworthy items would be appreciated. Help us make this newsletter interesting and useful to you and all Radio Amateurs.

### **FEBRUARY 1995**

The article you have just read was from the first edition of the *C&E*. I have discovered some very interesting facts concerning the *C&E* and CORA. Throughout this next year, I will be sharing with you the information I am collecting on the early years of CORA and the *C&E*. Some of the stories will be funny, others will be sad, while others will make you wonder if history is repeating itself.

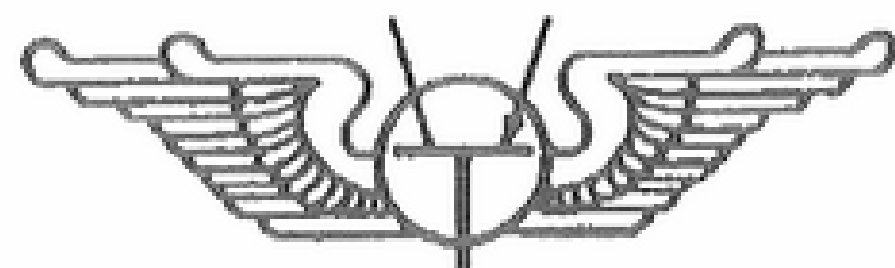
This is the 20th Birthday of the *C&E* being published by CORA. It was the Aeronautical Center Amateur Radio Club, Inc. newsletter. ACARC voted to loan the name of the newsletter as well as the "logo" to CORA and it was turned into a newsletter for the supporting clubs of CORA. It was to keep everyone informed of the latest happenings in the ham community. Have you ever wondered why the numbers on page 2 of the *C&E* are out of order as I have, wonder no more. The numbers of the first 4 clubs are in the order of oldest to youngest club . After the first 4 clubs, the rest of the clubs were assigned numbers in the order they joined CORA. Those numbers no longer being used remain so, I just haven't been able to ask the right person yet to discover why they remain unused. If you do, write to me or call, I am open to any added information you might wish to share. Another interesting fact I was told concerns the actual naming of the *C&E*. I was told that a contest was held to name the newsletter and that W5OH was the person who won, naming the newsletter the *Collector and Emitter*. If anyone can bring to light more information about this, please do so.

We will also rerun any tech articles that you request as long as I can find it. There are, as far as I know, only 2 locations that have past issues of the *C&E*. I have the ones that Joe Harding kept, beginning with February 1975, and were given to us by his family and now belong to CORA. The most complete set are the ones that belong to the ACARC, which includes issues before CORA was even thought of.

Next month " how CORA came into being" and did they have a good turn out at the February 1975 meeting, must have 'cause we're still here and the date is 1995!.

Linda, N1LPN

de WA4AQW



## W5PAA - Aeronautical Center Club

The club did not have a meeting in January due to the local meteorologist prediction of a winter storm warning arriving that night. Again, they were wrong and the storm never arrived. The way weather changes here in Oklahoma I sure wouldn't want to be in their business.

Our No Code Technician classes are going good, we have averaged 21 students and are in our 8th week. We expect to finish classes in three weeks with an additional week of review finally VE testing on March 2. W0DXA's VE team will administer the exams.

Preparation is underway for providing an Amateur Station for Aerospace America. We have been asked to try and make contact with another Air Show that will be happening in France. Hopefully, conditions will get better to permit this to happen. Last year, a Sarex shuttle mission was in progress and we were asked to provide communications. If there is a mission going this year I expect we will be asked to make connection with them once again.

And finally, elections will be held on Thursday February 2 to elect new officers for this year.

73 Brad, KJ0W  
Sec/Treas

## Final Frequencies Selected for P3D

Provided by Keith Baker, KB1SF  
Executive Vice President,  
AMSAT - NA

Following a series of discussions, a number of iterations and intensive study, the builders of the P3D communications equipment have made their final selections of the satellite, now scheduled to be launched in April of 1996. These selections have since been approved by the P3D Project Leader, Dr. Karl Meinzer, DJ4ZC.

These frequencies were carefully selected to minimize mutual interference with other Amateur Satellites and have been coordinated with IARU band plans by the P3D Frequency Coordinator, Freddy de Guchteneire, ON6UG, with assistance from Peter Guelzow, DB2OS, and Werner Haas, DJ5KQ.

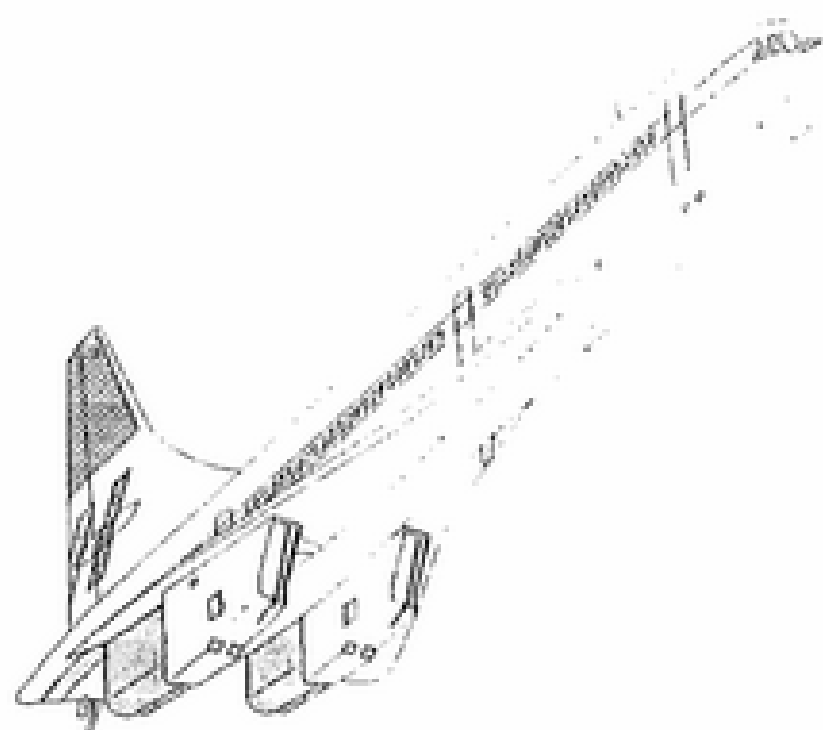
Crystals have been ordered for all receivers and transmitters to implement these frequencies. In accordance with P3D design concept, all receivers and transmitters are connected to the IF Matrix which allows interconnection of the various receivers and transmitters to create what have been known as transponders on former Amateur Radio satellites.

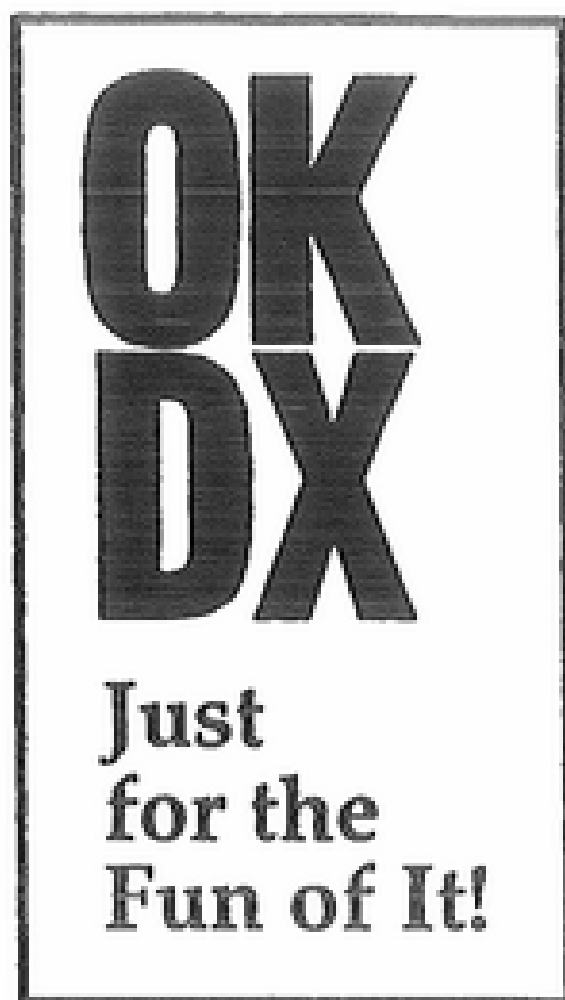
See the chart for the selected frequencies

The absence of a 2 meter beacon is strictly due to characteristics of the IF Matrix and the limited bandwidth available on that band. Studies are underway with the intent of providing a 2 meter beacon, but it is not clear at this time whether this effort will be successful. The beacons on the other bands are for various purposes including providing spacecraft engineering data to the command stations. All beacons can be modulated with 400 bits per second BPSK and possibly other formats.

AMSAT wishes to thank P3D International Team members Freddy de Guchteneire, ON6UG, Peter Guelzow, DB2OS, Werner Haas, DJ5KQ, and Karl Meinzer, DJ4ZC.

UPLINKS			
BAND	DIGITAL(MHZ)	ANALOG(MHZ)	CENTER(MHZ)
15M	N/A	21.210 - 21.250	21.230
2M	145.800 - 145.840	145.840 - 145.990	145.915
70CM	435.300 - 435.550	435.550 - 435.800	435.675
23CM(1)	1269.000 - 1269.250	1269.250 - 1269.500	1269.375
23CM(2)	1268.075 - 1268.325	1268.325 - 1268.575	1268.450
13CM(1)	2400.100 - 2400.350	2400.350 - 2400.600	2400.475
13CM(2)	2446.200 - 2446.450	2446.450 - 2446.700	2446.575
6CM	5668.350 - 5668.550	5668.550 - 5668.800	5668.675
DOWNLINKS			
BAND	DIGITAL(MHZ)	ANALOG(MHZ)	CENTER(MHZ)
10M	29.330 MHz $\pm$ 5 KHz (To be used for digitized voice bulletins)		
2M	145.955 - 145.990	145.805 - 145.955	145.880
70CM	435.900 - 436.200	435.475 - 435.725	435.600
13CM	2400.650 - 2400.950	2400.225 - 2400.475	2400.350
3CM	10451.450 - 10451.750	10451.025 - 10451.275	10451.150
1.5CM	24048.450 - 24048.750	24048.025 - 24048.275	24048.150
All downlink passbands are inverted from the uplink passbands.			
BEACONS			
BAND	Beacon - 1	Beacon - 2	
2M	N/A	N/A	
70CM	435.450	435.850	
13CM	2400.200	2400.600	
3CM	10451.000	10451.400	
1.5CM	24048.000	24048.400	





# OKlahoma DX Association

## Application for Membership

The OKDXA is a federation of Amateur Radio DXers from Oklahoma, the nation and the world. Our purpose is to promote the DX phase of our hobby by encouraging newcomers, supporting the DX Packet Cluster system, helping to disseminate DX information and helping to support strategic DXpeditions.

The spectrum of DXing expertise in our group ranges from beginner to Top-of-the-Honor Roll. If you have questions, you will find an abundance of answers and opinions. We meet as a body at the Tulsa, Lawton, Oklahoma City and Texoma hamfests (look for our table in the flea markets and come to the luncheons). We share written information quarterly through the OKDXA Newsletter. And, propagation allowing, we communicate weekly (except for major contest weekends) on the OKDXA Net, currently meeting on Saturday mornings, 1100 hrs local time on 3860 Khz + QRM (alternate — 7235 Khz + QRM at 1105 hrs).

Voting membership is open to any licensed Amateur Radio operator. Dues are \$10 annually, September-through-August. A non-voting free Associate membership is available to those 18 years old and younger. We invite you to join in the fun and the camaraderie! Send your dues to our OKDXA Treasurer. Checks are preferred and should be made out as follows, OKDXA, Mark Byard, Treasurer.

Mark Byard, N5OGP  
504 Foster Avenue  
Ponca City, OK 74601  
(405) 762-1966

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Name: \_\_\_\_\_ Call sign: \_\_\_\_\_ Mail Addr: \_\_\_\_\_

City: \_\_\_\_\_ ST/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Phone:( ) \_\_\_\_\_ ARRL Member? \_\_\_ DX Pkt Cluster User? \_\_\_ Home Node? \_\_\_\_\_

Most-needed countries? \_\_\_\_\_

Current country count (Current/Total)? \_\_\_\_\_

DXCC? ☐ DXCC Phone? ☐ DXCC CW? ☐ DXCC RTTY? ☐ 5BDXCC? ☐

Honor Roll? ☐ Top-of-the-Honor Roll? ☐ VUCC? ☐ WAZ? ☐ 5BWAZ? ☐



## VHF Club

### NEWS

W5LOW

Elmer Goekler Memorial  
Station

#### Minutes of January Meeting

Meeting was called to order at Neighbors 12:02 p.m. by President J, KB0QJ, with 19 members present. Ellard, W5KE, gave his Treasurer's report, which was accepted by motion. We got right down to business and elected the officers for 1995. They are:

Jackolyn Olsen, KA5ENU, President  
Ken Eason, KF5JS, Vice President  
Ellard Foster, W5KE, Treasurer  
Joe Buswell, K5JB, Secretary

With that done, motion passed that Jackolyn be presented the Turkey award for letting this happen to her.

It was noteworthy that Fred, W5NL, and Margaret, are celebrating their 51st wedding anniversary. Congratulations, Fred and Margaret!

Meeting adjourned at 12:08 p.m.  
Joe, K5JB, Sec'y

#### Antenna Figgerin'

It is a bit premature that I start this article because I haven't yet reached the conclusions I need to make the article complete. Having said that, I will go ahead and blunder along, describing some adventures started when Gene (Super Airplane Radioman), K5DLE, did some work on the airplane some weeks ago. While Gene was doing the work I was kibitzing. We were giving the airplane a thorough going-over to find and fix any antenna system deterioration that had happened over the years. (There are nine antennas on the thing, not counting the GPS and my amateur radio antennas.) In the process of analyzing the communication (voice) antennas, we ran into something strange.

One of the communication antennas looked pretty shabby and we were going to replace it but before doing it Gene wanted to sweep

the antenna systems to see what they looked like before replacement. In the process of doing this we found a strange frequency response, and after disconnecting antennas and connecting to a dummy load much of the strange frequency response was still there. After much digging and looking, Gene found a couple of pi networks in the radio mounts, wired between the transceiver antenna jacks and the feedlines. After bypassing them and testing the feedlines and antennas we made all the changes we were going to make and proceeded on.

The transceivers had been bench tested and adjusted and sounded reasonably good, but after installing them in the airplane one of them had a squeal on the transmit signal. We swapped the radio positions and the problem persisted with the other radio mounted in the number 1 comm slot. After some headscratching, etc. we decided that maybe that crazy pi network was affecting the transmitter loading and causing the problem. I made a command decision to chop the network out of the number 1 slot and Gene did it.

Shortly I will get to the point of this article, but will jump ahead a little first. After reinstalling a radio in the rack minus the pi network, we still had the squeal. In the process of shaking things I noticed that the automatic direction finder (ADF) sense antenna, a wire strung from fuselage to tail, was swinging in time to the sound of the squeal. When I climbed on a ladder and touched the antenna the squeal went away. We investigated the whole sense antenna installation and then discovered that when the ADF receiver was turned on, no squeal, when turned off, number one radio squealed. Exactly what is causing this is the conclusion I don't have yet. But now we can continue with the point of this article.

With the observations that Gene made about the pi network, I was going to go home that evening and return the next morning with a frequency response plot so we could see if we could rationalize the strange readings we took. My first approach, because I thought it would be the fastest, was to use an electronic spreadsheet program on the computer to run through the

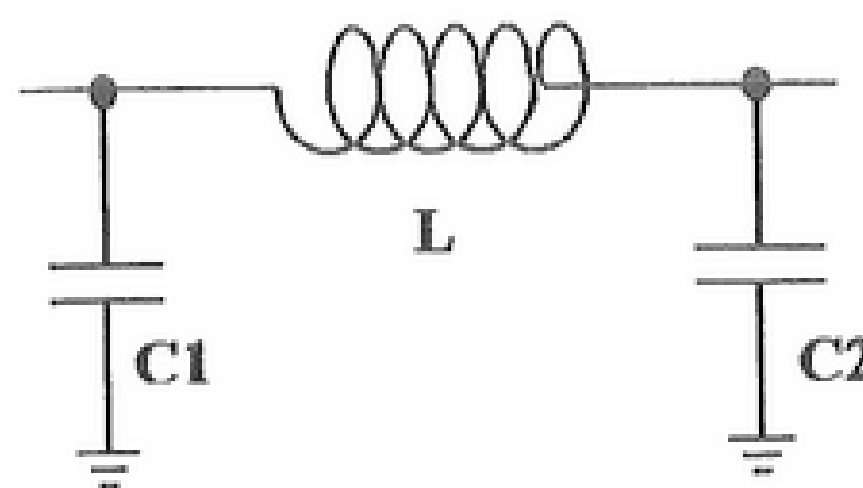


Figure 1. Pi Network

pi network and create a table of impedances and from that draw a curve. As soon as I had finished my dinner I started. The first cut wasn't too difficult -- I will explain it shortly, but to get the calculations down to a single line was going to take some doing, and by the next morning, time to meet with Gene, I had some numbers but they just didn't look right. And as I found out later, they weren't.

Before I continue, let's make sure you remember some things out of your BASH book. Impedance ( $Z$ ) is made up of a resistive part ( $R$ ) and a reactive part ( $X$ ).  $X$  for an inductor is  $2\pi fL$ , where  $f$  is the frequency.  $X$  for a capacitor is  $1/2\pi fC$ . Capacitive reactance by convention is negative. Admittance,  $Y$ , is  $1/Z$ . Conductance,  $G$ , is  $1/R$ . Susceptance,  $B$ , is  $-1/X$ . I will use " $R + X$ " here, but remember that is a complex number, you don't actually add them directly. Impedance is normally used in series circuits, admittance is used in parallel circuits. The reason is simple. In a series circuit, current everywhere is the same. In a parallel circuit, voltage is everywhere the same. In a series circuit, the sum of the voltages is zero. In a parallel, the sum of the currents is zero. Now that you remember that, we can proceed.

Here is the process for figuring your way through a pi network, or any network containing series and parallel reactive components. Refer to Figure 1. The side having  $C1$  is connected to the radio, and the side having  $C2$  is connected to the antenna. For simplicity, I assumed that the antenna was a 50 Ohm resistive load. That 50 Ohm resistor is in parallel to  $C2$ , so we could figure the impedance first, but since not all antennas are resistive loads we should first

figure the impedance of the antenna's resistance and reactance. This would just be  $R + X$ . In order to combine this with the reactance of  $C2$  ( $1/2\pi fC$ ), it is easiest to convert  $C2$  to susceptance and the antenna impedances to admittance. Then we simply add them. (Hint, if you are using a calculator, convert rectangular to polar, invert the polar and convert back to rectangular to go from impedance to admittance, and vice versa.  $Y = 1/Z$  but you are working with complex numbers when in rectangular coordinates, but simply magnitude and angle when in polar coordinates.)

Once we have the admittance of the antenna load and  $C2$ , we convert back to impedance and add the reactance of the inductance. Another hint: if  $X$  is positive (inductive),  $B$  will be negative. If  $X$  is negative (capacitive) then  $B$  will be positive. The type of component doesn't change, just the sign.

After we have added the reactance of  $L$  ( $2\pi fL$ ) and the combined impedance of  $C2$  and the antenna, we have reached  $C1$ . We need to convert our reactance to admittance again since  $C1$  is in shunt, add it to the susceptance of  $C1$  ( $2\pi fC$ ) and we have the admittance into which the transmitter will be looking. We convert this back to impedance ( $R + X$ ) so we won't be trying to stand on our head to understand the values.

The problem, besides complexity of putting this into a one line formula on the spreadsheet, was that initially I was using some trigonometry and the phase angles at various points to get intermediate impedance, admittance, reactance and susceptance values. In two places I got the sign wrong so no wonder the answers didn't look right.

I didn't find my error until I reviewed a couple of ARRL handbooks, the RSGB handbook, *Reflections*, the book loaned to me by Gene, and a couple of CD-ROMs containing some old BASIC programs for figuring networks. That last one was an interesting and time consuming exercise in itself. I found many programs, but most of them would blow up if I fed them resonant circuits. They had no traps for values outside the range of BASIC. It was actually the 1980 ARRL handbook and *Reflections* that

had the most information necessary to find my error in the network problem.

One of the BASIC programs, called NETWORK, was OK, but was kind of limited for what I wanted to do. The way it worked was this. You draw out a network diagram and label the connections with node numbers. Ground is always node number 0. Input, where a 0dB voltage is induced, is node number 1. The highest node you specified becomes the output node. With our network, we could specify node 1 being the junction of  $C1$  and  $L$ , node 2 being the junction of  $L$ ,  $C2$ , and the antenna load impedance. Problem with this was that I had difficulty relating to what I was seeing at the output on node 2.

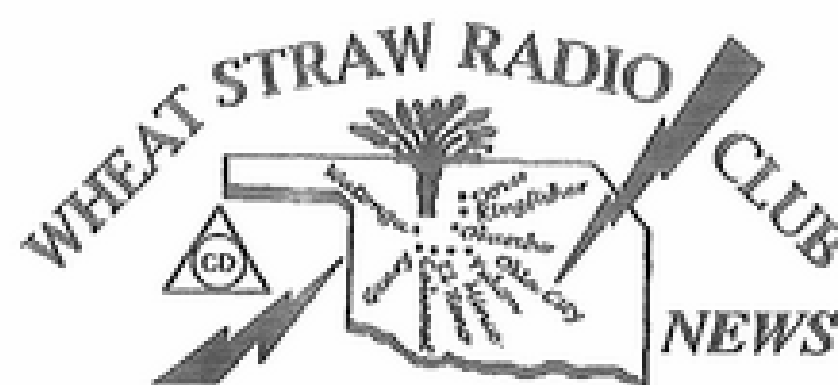
Another program, which was compiled BASIC, and for which I didn't have source, was called CIRCUIT. It was more flexible because it would let me specify which node I wanted to watch. I found the most interesting results when I made a network consisting of a resistor representing the transmitter's output impedance between nodes 1 and 2. I put  $C1$  from node 2 to ground,  $L$  from node 2 to node 3, and  $C2$  and the antenna from node 3 to ground. Then I looked at node 2, the junction of the transmitter resistor and the pi network and swept the frequency. At the pi network design frequency the output was down -6dB and phase angle was zero, meaning that the pi network was working perfectly.

I gathered up the programs I had culled out and gave them to Gene to give him some sleepless nights. His assignment was to look them over and tell me which ones gave the right, and which ones gave the wrong answers. In return, he loaned me his *Reflections* book (M. Walter Maxwell, W2DU, available from ARRL) and said I was going to have to make a book report on it.

#### More Technical Advice

My friend Ralph, WA5PFK, told me you could tell how long a feed line was by using the same method you use to figure out how long a rope is. You take half its length and multiply by two. That makes sense to me!

Joe, K5JB



#### Wheatstraw January Meeting

The January 8 meeting was held at the Northwest Community center in El Reno OK. There were twenty two members present, with no visitors.

Meeting was called to order by our president, Leo, WZ5H. Joe, WA5FLT, read a thank you letter from the Crippled Children's hospital thanking the Wheatstraw club for the gift of \$100.00 to purchase gifts for the children there in the hospital. The club has been sending them money, collected at the Christmas dinners, for many years.

Ralph, WA5PFK, advised that the Wheatstraw has been in existence for 35 years as of February 1995, and he thought we should have a 35 year reunion.

The motion that we conduct such a reunion was made and passed. The president appointed Johnny, K5GBN; Ralph, WA5PFK; and Harold, KA5WHJ, to a committee that would find a place to have it and when to have the reunion. We will wait until after the winter is over to set the date. Watch for the notice.

Ralph made a report on the prices of tee shirts, with screening, from the Country Peddler in Watonga. After kicking it around for a while, Ralph was asked to check on red vest prices with logo and screening.

The next meeting will be held February 12 in the Canton Community Center.

It is located on Garfield St. When you come to the stop and go light, turn west. After you pass the laundry on the north side of the street, and just before the Mini Stop on the east side, turn north and you can't miss it. It will be the middle room where it has been before.

Ralph, WA5PFK



## **My Back is Bent**

by Carol Hogan

My back is bent, as you can see  
and I have curled up toes.  
My knees and elbows all have pain,  
but that's the way it goes.  
The troubles in my legs and veins  
make it hard to run.  
Still, this old heart's so filled with love  
it thinks it's twenty one.

## **Speedy Flight**

Unaware that Indianapolis is on Eastern Standard Time and Chicago on Central Time, a man inquired at the Indianapolis airport about a plane to Chicago. "One leaves at 1 p.m." a ticket agent said, "and arrives in Chicago at 1:01 p.m."

"Would you repeat that, please?" the man asked.

The agent did so and then inquired, "Do you want reservations?"

"No!" said the man, "But I think I'll hang around and watch that thing take off."

## **Shiver!**

Late one night, after an evening of drinking, Smitty took a shortcut through the graveyard and stumbled into a newly dug grave. He couldn't get out so he laid at the bottom and fell asleep. Early the next morning the old caretaker heard moans and groans coming from deep in the earth and went to investigate. When he saw the shivering figure at the bottom he demanded, "What's wrong with ya, that you're making all that noise?"

"Oh, I am awful cold!" came the response.

"Well, it's no wonder," said the caretaker, "you've gone and kicked all the dirt off ya!"

## **Ham Radio on Space Shuttle**

from W5YI Report

School children talked to astronauts aboard the STS-60 Shuttle Discovery in February,

the STS-59 Shuttle Endeavor in April, and Discovery again STS-64, in September. The ham astronauts also talked with radio amateurs around the world. They also logged hundreds of automated packet radio contacts.

NASA is hoping to make astronauts available for the SAREX (Shuttle Amateur Radio Experiment) program to involve the largest possible number of people, particularly youngsters, in technology and the U.S. space program with the help of amateur radio.

## **FCC Regulatory Fees**

The FCC proposed in March to activate "Regulatory Fees" which would be payable to the U.S. Treasury by most radio licensees except for emergency, public safety, and amateur radio operators. The proceeding went through the comment period in an unbelievably fast 30 days and was implemented in July.

The regulatory fee will reimburse the government for cost of providing radio service enforcement, rule making, user information services and various international activities.

## **International Amateur Radio Licensing**

In June the FCC began consideration of a plan that could lead to international licensing of ham radio operators. The Conference of European Postal and Telecommunications Administrations (CEPT) consists of about 40 European nations that recognize each other's amateur radio license. There is also a provision for countries outside of Europe to join that agreement and the United States is looking into it.

The CEPT countries only recognize two classes of ham licenses. Class 2 is a VHF and higher frequency no-code license and, Class 1 is an all band ticket requiring telegraphy knowledge. Each CEPT member determines how its licenses convert to these two classes.

The FCC is also working on an international operating permit for the Americas,

North, Central and South America.

## **Electronic Filing of Amateur Applications**

The FCC developed software to be used by the volunteer examining community to electronically input FCC form 610 amateur radio applications into their licensing computer.

Effective December 20, new amateurs may go on the air once their licensing data appears in the FCC data base. The rule requiring that a licensee have a paper license document in his/her possession when operating on the amateur airwaves has been dropped.

## **ARRL News Briefs**

Word was received that in August, Frank Caswell, W1ALT, died in Beverly Massachusetts. Caswell was first licensed in the 1920s and he personally collected, recorded and documented the history of the Marconi wireless station at south Wellfleet, on Cape Cod. He also built the replica rotary spark gap and model of the Marconi station that are on display at the headquarters of the Cape Cod National Seashore at South Wellfleet.

## **Government**

During a terrible snowstorm one winter, many of the highway signs were totally covered with snow. The following spring, the state decided to raise all the signs twelve inches.

At a cost of six million dollars, each sign was equipped with a new pole, one foot longer than the old pole.

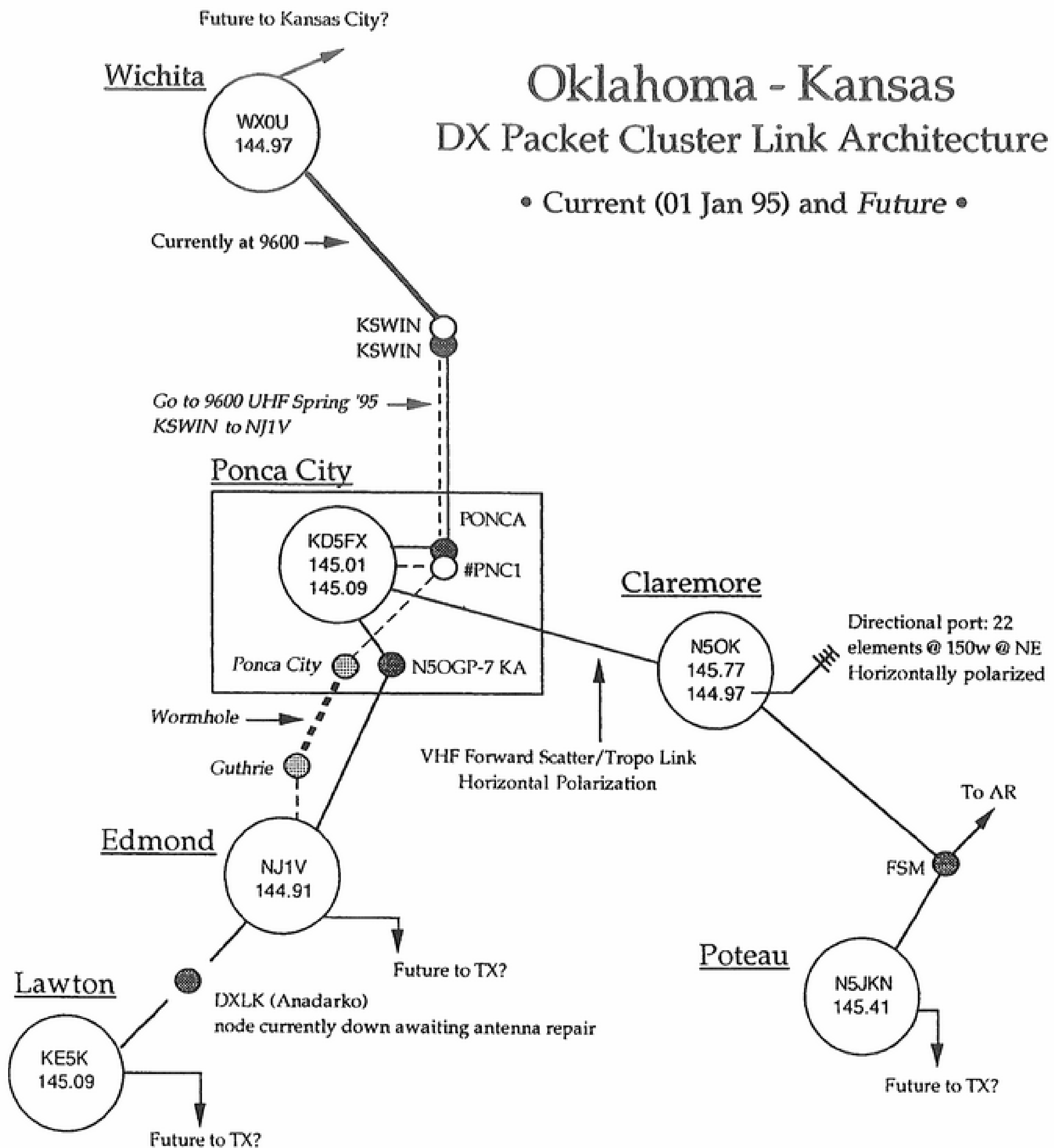
"That's an outrageous price," said a local farmer, "but I guess we're lucky the state government handled it, instead of the federal government." "Why's that?" his neighbor asked.

"Because," the farmer answered, "knowin' the federal government, they's have decided to lower all the highways."

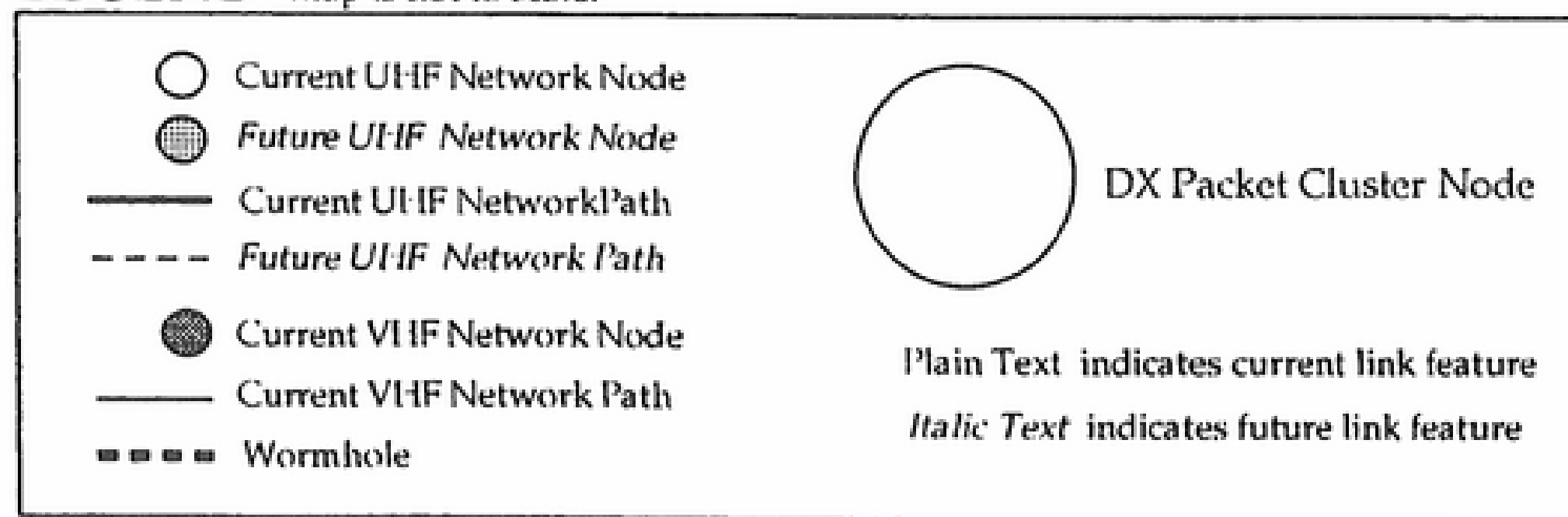
Ralph, WA5PFK

# Oklahoma - Kansas DX Packet Cluster Link Architecture

• Current (01 Jan 95) and *Future* •



## LEGEND Map is not to scale.



## Power Line Interference

It's a really discouraging sound coming from your HF rig. Sometimes it's S9 background noise, sometimes intermittent pops and crashes. However it sounds, it is interference with your amateur operation, and is illegal.

The FCC calls it unlicensed operation of an unintentional radiator, and it has no right to be there, no matter that the power company has been in business since year one, or that they do not respond to your complaints. A case study in handling interference from power lines is the recent experience of WB5NKC, Arley Garvin, 3409 S. W. 20th, in Oklahoma City.

In the summer of 1994, Arley decided to try to do something about the power line interference he was experiencing. He had lots of different symptoms, and thought there were several sources of the interference he was hearing. He took a his car, with radio tuned to the Tulsa station KRMG at 740 kHz, and roamed around his neighborhood. He found several places with very high levels of noise, and made notes on what he found. He then tried to get someone at O. G. & E. to listen to his complaints and take some action. He reported the location and noise he heard to the service telephone number and in a letter to O. G. & E. and waited. (The address to write to, if you have like problems, is: General Manager, O. G. & E., PO Box 321, Oklahoma City, OK 73101. It is important to keep a copy of your letters.)

After a month, he called back to see what action had been taken. Nothing had been done. He then wrote O. G. & E. another letter with the same complaints with a copy to the FCC; again no response. He then wrote the ARRL and received a letter from KJ4KB, John C. Hennessee, the Regulatory Information Specialist, which listed the steps he should take to get the problems resolved. The next step was to write to the

Oklahoma Corporation Commission, according to ARRL.

After some time and after sending copies of letters to O. G. & E. and the FCC to the Corporation Commission, he received a letter from the Corporation Commission which stated "the Commission lacks regulatory jurisdiction over problems involving electrical interference" and that they could not take any action. At this time, Arley again wrote the FCC and reported the locations and the interference being transmitted. The FCC sent Arley a copy of a letter they wrote to O. G. & E. referring the complaint to them, and asking for a reply from O. G. & E. O. G. & E. sent Arley a copy of their reply to the FCC which claimed numerous efforts on their part to resolve the problem. They had found powerline interference in only one location. They said that crews reworked all structures within a one mile area tightening and replacing pole hardware. However, they sent the reply to 2409 SW 20, not 3409 SW 20. They do not know where Arley lives!

After another month, nothing had happened. Finally, Arley wrote Sen. Don Nichols' office with the complaints.

Right away, a field agent of the FCC based in Dallas showed up at Arley's home with equipment to survey the noise problem, and verified what Arley had told the FCC. The field man was a ham, but would not give his call. After he left (to call upon a local broadcast station), Arley thought all would be well and the noise problem soon would be corrected. Nothing has happened on this front as yet, two weeks later. Stay tuned for further developments.

It is clear that the power company could not care less about the noise problem. It doesn't affect the daily revenue and transmission of electrical energy to homes to any great degree. Even trees growing into power lines have not been trimmed; one of the complaints Arley reported. The regulating authority for the State doesn't care or else they have no power to compel reduction of noise

inadvertently generated by bad connections, defective transformers, etc.

Only the FCC and the Justice Department have the hammer which can force the power companies to eliminate the noise. The code section which does this is Section 15.5 of Title 47 of the Code of Federal Regulations (CFR), which says:

(a) Persons operating intentional or unintentional radiators shall not be deemed to have any vested or recognizable right to continued use of any given frequency by virtue of prior notification of use pursuant to section 90.63(g) of this chapter.

(b) Operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused ...

(c) The operator of the radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference.

Left to themselves, the FCC is not particularly responsive to complaints by amateurs or others about noise, but when legislators write letters, they at least respond. This seems to be the best hope for getting things resolved.

The following is Arley's recommendations to getting your problem resolved:

=> Step 1: Call OG&E, and tape record the response, if possible. Be friendly, even if you are mad as hell.

=> Step 2: Write them letters. Photocopy and save for documentation. Get return receipt, proving they got it.

=> Step 3: Follow the suggestions in the ARRL "The FCC Rule Book" page 3-25 about handling the interference.

=> Step 4: Notify the Corporation Commission even if they don't have authority to cure the problem, to document, if nothing else.

=> Step 5: If no action after 30 days, notify FCC and any friends you have in Congress, since it's a Federal rule being broken.

=> Step 6: When the FCC contacts you, be ready to sacrifice two or three days working with the engineer finding the trouble.

# DA' Clubs/Schedules!!!

de DL4VCW @ LX0PAC.LUX.EU (Daniel)  
to ARRL @ WW

Several hams have recently asked how they can contact DA' stations or clubs in Germany. Below is an updated list of all known DA' clubs and their operating schedules and frequencies. Some of them also provide ARRL VE FCC test sessions on a regular basis--normally quarterly.

If you are planning to visit or move to Germany, feel free to contact one of these clubs to obtain guidance on how to obtain a German license during your stay. 73's, Daniel. DL4VCW @ LX0PAC.LUX.EU  
(DL4VCW/KA7AGN)

As of 10 January 1995

"Ragchew" Net                    3663.0 KHz (+-QRM)  
AREA: Europe wide  
SCHED: Sundays at 2000 local  
PREFERRED LANGUAGE: English  
NET CONTROL: Rotates - Generally first person on frequency. If you don't hear that anyone has started, or you are FIRST on frequency then please start the net. Thanks.  
PURPOSE OF NET: Provide an informal gathering place for English speaking hams  
POINT OF CONTACT: DL4VCW @ LX0PAC.LUX.EU

Eifel Amateur Radio Club (EARC)    144.725 (CTCSS 88.5)  
AREA: Bitburg, Speicher, Spangdahlem, and Pruem  
433.500  
CLUB CALLSIGN: DA1BT                    439.150R  
CLUB SCHEDULES: Sundays at 1900 local, 144.725 Mhz  
29.300 FM  
POINT OF CONTACT: DL4VCW @ LX0PAC.LUX.EU  
DL4VCP @ LX0PAC.LUX.EU  
NOTE: ARRL/VE FCC testing available quarterly

Wiesbaden Amateur Radio Club (Wies-ARC)    144.615  
AREA: Wiesbaden and Frankfurt                    439.075R  
CLUB CALLSIGN: DA1WA  
CLUB SCHEDULES: Sundays at 2000 local, 144.615 Mhz  
POINT OF CONTACT: DJ0HB @ DB0GV.#HES.DEU.EU  
DJ0TL @ DB0GV.#HES.DEU.EU  
NOTE: ARRL/VE FCC testing available quarterly

This Club also sponsors the annual trip to HB0/DA1WA. I have operated from this location two years prior to coming to OK. Listen for them over the Memorial Day weekend and following week.  
*The Editor*

U.S. FORCES Amateur Radio Club                    144.615  
AREA: Heidelberg and Stuttgart  
CLUB CALLSIGN: DA1US

CLUB SCHEDULES: As required  
POINT OF CONTACT: DA1GW @ DB0GV.#HES.DEU.EU

Bad Aibling Amateur Radio Society (BARS)                    144.615  
AREA: Bad Aibling                    144.525  
CLUB CALLSIGN: NONE                    434.525  
CLUB SCHEDULES: Sundays at 1100 local, 144.525  
& 434.525  
POINT OF CONTACT: DA2JP @ DB0MWS.#BAY.DEU.EU

Bavarian Amateur Radio Federation (BARF)                    144.615  
AREA: Nuernberg, Schweinfurt, Bamberg                    145.250  
CLUB CALLSIGN: NONE  
CLUB SCHEDULES: Sundays at 2030 local, 144.615 Mhz  
Sundays at 2030 local, in packet  
converse mode, channel 50 of DB0FP.  
POINT OF CONTACT: DA2ZF @ DBBAY.DEU.EU  
DA4WW @ DB0FP.#BAY.DEU.EU

Kaiserslautern Amateur Radio Society (KARS)                    144.725  
AREA: Ramstein Air Base and Kaiserslautern  
CLUB CALLSIGN: DK0KRS  
CLUB SCHEDULES: Sundays at 2100 local, 144.725 Mhz  
POINT OF CONTACT: DA1BD @ DB0GE.#SAR.DEU.EU  
DA1JL @ DB0GE.#SAR.DEU.EU  
DA2ED @ DB0GE.#SAR.DEU.EU

French Forces Amateur Radio Club                    144.725  
AREA: Wittlich, Daun, Trier, and Freiburg  
CLUB CALLSIGN: DA2REF and DA2KR  
CLUB SCHEDULES: As required  
POINT OF CONTACT: DA2LG and DAINB

Combined Amateur Radio Society (CARS)                    144.550  
AREA: Rheindahlen  
CLUB CALLSIGN: DA1HQ  
CLUB SCHEDULES: As required  
POINT OF CONTACT: DA2MT @ PI8JOP.#LIM.NLD.EU  
DA1VC @ PI8JOP.#LIM.NLD.EU

## NOTES:

1. General bulletins TO or FROM call signs prefixed with DA' may be sent to the following: CQDA @ DL (SB CQDA @ DL.DEU.EU).
2. Please note that this list is only as current as the information provided to us. Please send updates to DL4VCW @ LX0PAC.LUX.EU or DB9OJ @ DB0DNI.DEU.EU. This list is updated 4 times annually.

Please pass around the above list. See you on the air,

From: DL4VCW - Daniel, on Neidenbach, Germany  
Packet: DL4VCW @ LX0PAC.#BIT.LUX.EU  
E-mail: 100115.1164@CompuServe.Com  
10-Jan-95 AT 12:20 UTC

# The Bertha Watson Scholarship

Sponsored by the  
Edmond Amateur Radio Society

The information requested herein will be used by the selection committee in awarding of the scholarship. All information will be confidential and the application will be seen only by the members of the selection committee. All areas requested will be considered by the committee; however, no single area will preclude an applicant from receiving the scholarship. All applications will receive the same impartial consideration. If selected, the applicant agrees to allow his/her name to be used in publicity pertaining to the scholarship. Scholarship recipients will be presented a certificate at a conference in Oklahoma City in July.

Applications are to be returned to a member of the scholarship committee by March 27, 1995.  
Return applications to:

Barbara Kiespert  
804 Dripping Springs  
Edmond, Oklahoma 73034 - 8717  
(405)348-9338

This scholarship is open to all High School seniors and college students of all ages. Applicants need not be an Amateur to apply.

SCHOLARSHIP APPLICATION  
EDMOND AMATEUR RADIO SOCIETY / BERTHA WATSON  
AND  
CENTRA OKLAHOMA RADIO AMATEURS, INC.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
                    LAST                      FIRST                      MIDDLE

ADDRESS: \_\_\_\_\_  
                    STREET  
                    \_\_\_\_\_  
                    CITY    STATE    ZIP

PHONE: \_\_\_\_\_

A. Submit any information regarding your scholastic abilities. Please include your most recent transcript and any of the following you can.

ACT SCORES: \_\_\_\_\_

SAT SCORES \_\_\_\_\_

RANK IN HIGH SCHOOL GRADUATING CLASS: \_\_\_\_\_

IN WHAT SCHOOL (COLLEGE, UNIVERSITY, OR VOCATIONAL SCHOOL) ARE YOU PLANNING TO ENROLL FOR THE FALL?  
\_\_\_\_\_

HOW MANY CREDIT HOURS WILL YOU TAKE THE FALL SEMESTER: \_\_\_\_\_

INCLUDE A COPY OF YOUR CURRENT TRANSCRIPT.

INCLUDE A COPY OF YOUR CURRENT CLASSES.

INCLUDE A COPY OF YOUR SCHEDULE FOR NEXT FALL IF AVAILABLE.

B. WHAT IS YOUR MAJOR: \_\_\_\_\_

WHY HAVE YOU CHOSEN THIS FIELD? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WRITE AND ATTACH A BRIEF ESSAY ABOUT YOUR EDUCATIONAL AND/OR CAREER GOALS.

C. LIST ACTIVITIES IN WHICH YOU ARE OR HAVE BEEN INVOLVED. INCLUDE EXTRA-CURRICULAR ACTIVITIES, SPECIAL PROJECTS, OFFICES IN ORGANIZATIONS, COMMUNITY SERVICE, AND VOLUNTEER WORK.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DESCRIBE ANY ACTIVITIES IN AMATEUR RADIO IN WHICH YOU HAVE BEEN INVOLVED.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D. OUTLINE YOUR WORK EXPERIENCE.

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E. SUBMIT THREE (3) LETTERS OF REFERENCE (FROM INDIVIDUALS NOT RELATED TO YOU)

(PART F. TO BE COMPLETED BY AMATEUR RADIO OPERATOR OR RELATIVES OF HAMS)

F. ARE YOU A HAM? \_\_\_\_\_ IF SO, CALL SIGN: \_\_\_\_\_

CLASS OF LICENSE: \_\_\_\_\_

IS ANYONE IN YOUR FAMILY A HAM? \_\_\_\_\_ WHO \_\_\_\_\_

HOW IS THIS HAM RELATED TO YOU. \_\_\_\_\_

I, \_\_\_\_\_, DECLARE THAT THE INFORMATION PROVIDED FOR CONSIDERATION OF THIS SCHOLARSHIP IS TRUE AND ACCURATE. I GIVE MY PERMISSION TO THE SCHOLARSHIP COMMITTEE TO SEEK ANY INFORMATION AVAILABLE CONCERNING MY ACADEMIC RECORDS.

\_\_\_\_\_  
SIGNATURE OF APPLICANT

\_\_\_\_\_  
DATE



## Edmond Amateur Radio Society

Edmond, OK  
February 1995

Hello Folks:

Its been a long while since I sat down long enough to write a article for the C&E, but I guess its time to try and make up for lost time. It's customary for the past President to submit an article based on the accomplishments of the club over the last year. I guess you could call it a brag sheet or list.

Recently at a 20 year anniversary party at work I was asked what my greatest achievement was, after great deal of thought (a large chore for me) I replied, I made it to work today !! Just think about it. What have you accomplished this last year? I guess you could say I got through the year with out missing a meeting. What ever was accomplished I can not lay claim to it as it was a team effort. and I'm just one player on a great team !!!

The year started off with a dazzle of lights and glitter as 8 society members (myself included) boarded a plane, Las Vegas bound. (no we didn't invite the treasurer along) We all had a great time and came back millionaires or do you spell it EARS. We arrived back in OKC with a little less than we started with.

Along came February and found several of us on the way to the Elk City Hamfest, the first of the year for most of us. As always EARS was well represented.

As the month passed EARS members were found to be helping with parking at some type of show and tell at the new Santa Fe high school. Then along came the dinner meeting at Good Eats (which was an understatement) a great time was

had by all, even if it did rain. But what better way to remind us that we had a weather spotting class coming up on the first of March at the Edmond EOC.

And what about the snow storm on March the eight, I don't think that was covered in the spotting class. And then along came St. Patrick's day parade, down town OKC. (Does anyone remember the wedding ?) March seems rather busy as we attended a meeting with David Van Nostrand at the EOC. The meeting was very interesting. It was about what was going to happen during the up and coming storm season. What ! Another EARS business meeting. Then there was nothing until April

On the ninth of April was the annual pilgrimage to the Lawton hamfest. Another hamfest well attended by EARS, Another dinner meeting at Pepe's a good time was had as usual. The month came to a stand still the next day as I received word of the passing of one of my very good friends Alton Sage KB5LIC. A shock to all of us MAY HE REST IN PEACE 73



The month of May came with a brighter note and a few of us found ourselves enjoying St. John's Mayfest. Helping with the walk that took place on May first. Then like a flash another business meeting and then on to the Green Country hamfest. Then with out notice May passed us by.

WOW!! Does any body know what happened in June? All I can say is it passed extremely fast with only two

outstanding notes, the east link was installed and in operation on the 23 of June. Then came Field day and the dinner meeting all rolled up into one neat package.

July started off with a bang!! With searing temperatures the fourth of July parade was well under way. Chalk up another one for EARS, good job !!! The rest of the month paled compared to the fourth.

Is it August already? August was here and gone with a dinner meeting and Ham Holiday to top the month off.

September didn't let us down, we had our usual meeting. Then before you know it we were out in the COLD at the crack of dawn to do the UCO home coming parade. I saw a lot of team work that chilly day. And EARS keeps coming back for more, the very next day we did the Crop Walk for the Hope Center. Plus while all of that was going on EARS started the fall ham classes. All of that with out a hitch WOW!!!

October was very restful with a great dinner meeting at KB5RR'S house. What a great way to top off a month.

November. It's replacement time. The votes were cast and at last a new slate of officers had been selected. And with the speed of light, elected.

December was one month to remember. What a great month with all the hustle and bustle. The Christmas dinner was upon us with great food and great people. All coming together for a great time, and from a good source it has been said that Santa had the best time of all.

The year ended as it began with old Santa Claus departing from the hall with a big farewell to all.

73 Lee, KA5WIS

PS Just a little reminder 1995 dues were due on January 1 and the grace period will expire on April 1.

The dinner meeting will be at Pepe's on February the 17th. at 6:30 PM.





## Oldahoma City Autopatch Assn.

December Meeting (Christmas Party)  
December 20, 1994

No official business was conducted.

The prayer was said by Brad, KJ0W. There was lots of good food and fellowship available. The club purchased meat and those in attendance brought specialty dishes like vegetables, desserts, etc. Some members brought "White Elephant" gifts, which were raffled with the real prizes.

### Prize Winners and Their Prizes:

Mike, KB5WIC -- Drinking Glasses  
Hal, KB1ZQ -- Hard Drive  
John, NJ1V -- Calendar  
Mike, N5VIT -- I/O Board  
Mac, K2GKK -- Popcorn Tin  
Linda, AA5GS -- World Radio TV Book  
Mac, K2GKK -- Kenwood mike  
Rod, KC5DZH -- Power Strip and Assorted Computer Stuff  
Fred, N5NIO -- Repeater Directory  
Loyd, AB5I -- ???? in a box labeled VC-87 Remote for VCR  
Chuck, K5NK -- Happy Birthday Mug  
John, NJ1V -- Radio Classics Calendar  
Bob Robert, WA5BQX -- Ornaments  
John, NJ1V -- "Two Meter Rig" Home Brewed by K5NK  
Mike Begley II -- crud-o-ject  
Sue, N5VWG -- Equalizer  
Bob Robert, WA5BQX -- Heinz 57 Steak Sauce T-shirt and Apron  
Gene, KJ5GX -- "Wuzzy Zuzzy Three Fuzzy Computer"  
Jeff, WD0GTY -- VOM and 10 year old QST's  
Jim, N5OHL -- Wireman Book  
Mike, KB5WHJ -- Belau Stamps  
LaDonna, KB5GCG -- Christmas Candle Holders  
Gene, KJ5GX -- Hard Rock Cafe Pin

## Collector and Emitter, February 1995

Perry, KB5TOT -- Hard Rock Cafe Pin  
Earl, KC5LDT -- Coffee Mug from Tele Viv  
Clay, CHILD -- Hard Rock Cafe Bag  
Bill, N5TDP -- England Shropshire Pig Shelter  
Shannon, KB5RBX ??? Plate  
Hal, KB1ZQ -- Coke Egypto San Juan  
Bill, N5TDP -- something from Israel  
Carol, KC5EXR -- Sangean Antenna  
Forrest, N5VWF -- VHF Ground Plane Antenna  
Tim, N5USM -- TM241A Two Meter Mobile Rig

Our thanks to those who donated prizes. WV5S donated the Belau Stamps. KC5DRI and his wife donated many items including but not limited to souvenirs from Hard Rock Cafe's around the world, Cokes from around the world, and hand made Christmas ornaments from his home in Oklahoma City. Oklahoma Comm Center Donated 2 antennas. The two meter mobile rig was purchased by the club. The raffle was to support the Leonard Hanstein Memorial Scholarship.

Sixty-Nine people signed in, but there was an estimated 90 people in attendance.

Respectfully Submitted by,  
Perry, KB5TOT

### Minutes of OCAPA meeting January 17, 1995

The meeting was called to order by Brad, KJ0W at 7:30 pm.

There was a motion to accept the Minutes from the November meeting as published in the *C&E*. The motion was seconded and passed. Cheryl, KB5WQR gave the treasurer's report. There was a motion to accepted the treasurer's report. The motion was seconded and passed.

#### Vice President's Report:

Mike, KB5WIC reported that he and John, NJ1V met with Gary England to discuss issues concerning storm spotting and the repeater. Mike typed up a letter outlining the meeting and read it to the membership in attendance. John, NJ1V added comments about future coverage area requirements for storm spotting.

John announced that the weather meeting will be on Monday, February 20th at 7:00 p.m. at Grekel Studios. Grekel Studios is located at KWTW, Channel 9 Television Station on North Kelley. John indicated that it would be nice to have a announcement submitted to be printed in the *C&E*. Brad announced that Tom, WA9AFM will be the new KWTW Channel 9 liaison after the weather meeting.

### Technical Committee Report:

Mike, KB5WIC worked on the UHF machine over the Christmas Holidays. Mike said there is still some problem with the audio. The UHF machine was hit by lightning last night (Jan 16) and Mike worked on it today (Jan 17) and got things back up. Mike had to switch some power supplies around. Mike also switched the transmit antenna for the 147.21 machine. There is a problem with the feed line at about the 950 foot level. There was discussion about options to increase the reliability of the repeater and the need to harden up the repeater for storm season. Elmo, W5JCB offered to help with the repeater re-configuration and obtaining equipment.

#### Properties: No Report

**Field Day:** Brad, KJ0W asked for volunteer(s) for Field Day Coordinator(s).

**Salvation Army Net:** Brad, KJ0W indicated the need for support for the Salvation Army Net.

#### OLD BUSINESS:

Brad reported that the Christmas Party went well. We had left over brisket which has been frozen to be used for a later club function. John, N5SAM said the Leonard Hanstein Memorial Scholarship fund has grown thanks to the raffles associated with the Christmas Party. [Donations for the scholarship fund can be sent to Cheryl Brassfield, OCAPA Treasurer. Please note on the check memo section Hanstein Scholarship Fund.]

#### CORA Report:

Past treasurer Tom, K5LDI resigned. Perry, KB5TOT is the new treasurer.

## CHIT CHAT

Chuck, K5NK went to Altus to attend the Altus Association meeting. Chuck also went to a MORI meeting. Chuck reported he, John, N5SAM; Perry, KB5TOT; and Mike, KB5WIC went to the Oklahoma State Fair Grounds to check on the contract and reservations for Ham Holiday. Chuck reported that Mike, KB5WIC will help obtain / setup technical presentations for Ham Holiday. Please contact Mike with any ideas for technical presentations.

### NEW BUSINESS:

Hal announced that the club needed to decide whether or not to have a grace period for the C&E. There was a motion to allow a 1 month grace period. The motion was seconded and was defeated. There was a motion to allow NO grace period for the C&E subscription. There was a second and the motion passed. Hal reported that the C&E data base has been updated for MORI, OCAPA, and the Aeronautical Center clubs.

### ANNOUNCEMENTS:

Choctaw Swap Meet will be held this month at the Midwest City Community Center.

Shannon, KB5RBX, Loyd, AB5I, and John, NJ1V operated amateur station NJ1V during the IARU Phone Contest and won 1st in Oklahoma.

John, KC5DRI won the Gulf Coast Region in a VHF contest.

Randy, KA5ZZX gave a report on power line interference in the amateur bands and how to place a complaint with OG&E.

Hal announced the deadline for the Febuary C&E will be on January 27.

There was a motion to adjourn. The motion was seconded and passed. After the meeting adjourned several people bought tickets for the scholarship raffle. The winning ticket belonged to Jeff, WD0GTY. He won a box of Christmas cookies. The cookies were donated by Carol, KC5EXR.

Attendance was 30.

Respectfully Submitted by,  
Perry, KB5TOT

I honestly had a different topic for this months' article and had even written my rough draft. The problem I came up against was the fact that Hal, KB1ZQ, mistakenly dumped it off the hard drive. I can understand how it happened too, I had filed it under the date I had written it and not the date of the issue it was for. So instead of attempting to rewrite, I will bring you up to date on the latest happenings at our house.

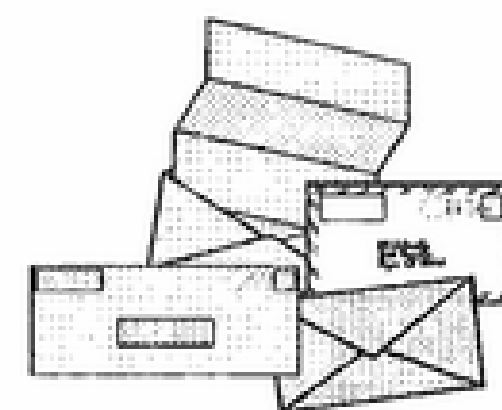
I am in the process of gathering information that will become a series of articles covering the history of CORA and the C&E. It has been a very long time since I have done any type of in depth research and I had forgotten how much I enjoyed the search for knowledge. I still find it hard to believe that I actually was able to pay my through college by being an English tutor specializing in research papers. Over the past month, I have had the honor of visiting with a few of our experienced hams and have been reading the past issues of the C&E covering 20 years of our rich history. If you have some interesting stories to tell, please give me a call(405) 672-7735.

I am also the new C&E Circulation Manager as of the 27th of December 1994. I have been slowly working with the different clubs. We have been up dating our data base as well as changing the mailing slips to comply with Postal Regulations. Hal and Joe, K5JB have been working on clearing the data base of all unnecessary information. It is just going to take everyone's help by filling out the slips and mailing them to me as soon as possible.

I saved the best for last. I have always wanted to have a house full of kids but the good Lord had different plans for me. I was blessed with a wonderful son 16 years ago. I have cared for kids most of my life and have watched as they became young adults. I only sit for those I hold dear now and do so out of love. Hal says if he gave the okay I'd have the house full of kids 24 hours a day, he's right! He does give the okay for my caring for one child now and

then. For the past weeks I have been given the honor to care for a newborn. I will only have her until she is old enough to go to work with her mom. Her mom is a teacher at a day care here in town. This little one has enriched all of our lives here and will be missed when her time with us comes to an end. I still can remember every child I have had intrusted into my care. Seeing life through a child's eyes, the wonder of a simple leaf, the surprise of first snow and the ahhh of the warmth of a sun kissed face ...and they are so willing to share it with anyone willing to see it too.

73, Linda, N1LPN



## Attention All Clubs

In the past, CORA has passed on the charges of returned C&Es due to change of address or address unknown to the individual clubs. Over two years ago this policy was changed to where CORA absorbed the extra postal charges. The cost was 35 cents for every returned mailing label. The charges have now increased to 50 cents for every returned label. When the post office is unable to deliver the C&E, they destroy the newsletter and only mail us the mailing label or front cover. That is what they say is now worth 50 cents. I am not sure how we plan to handle this at this time. As club members, please give your club your change of address as soon as possible and the clubs are to inform me. If returns continue to be on an average of 5 per week, I may have to go back to passing on the charges to the clubs or raise the cost of the C&E. I would rather we work together on this and just keep our records up to date. I know that 50 cents is not a lot of money but it does add up fast. I do not want to pay the post office any more money than we have to so please work with me on this.

Linda, N1LPN

Collector and Emitter, February 1995



The Oklahoma City Autopatch Association, (OCAPA) Will Hold Their Annual Weather Spotter's Meeting at Grekel Studio Located at KWTW Channel 9 TV Station.

*Learn What To Watch For During Severe Weather*

*Learn How To Report Severe Weather Accurately*

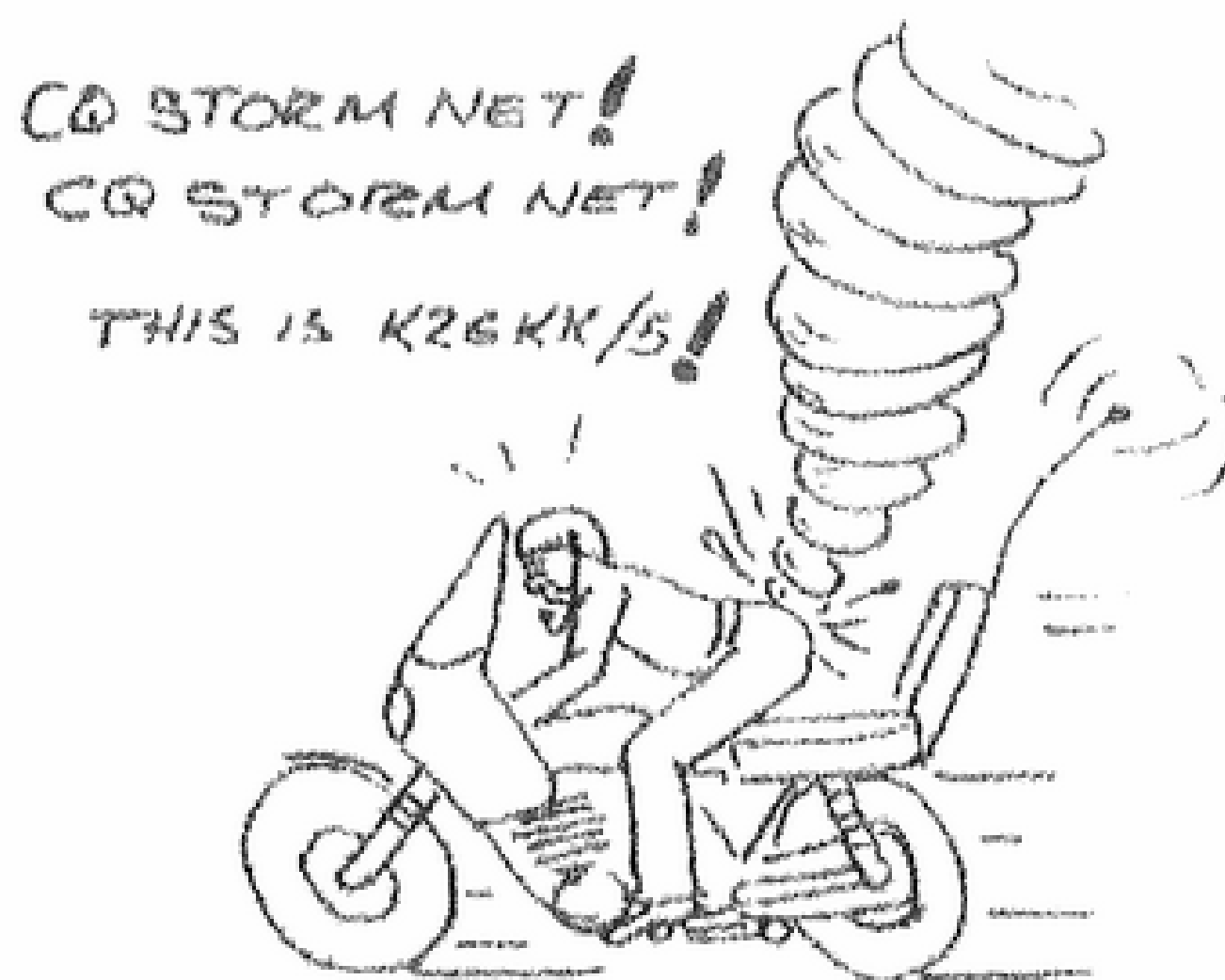
*Learn How To Stay Safe While Storm Spotting*

DATE: February 20, 1995

TIME: 7:00 pm

ADDRESS: 7401 N. Kelley Oklahoma City, OK

Oklahoma City Autopatch Association's Severe Weather Net is held during severe weather on the 146.22/82 repeater. This net is in cooperation with KWTW Channel 9 and Gary England. This net is conducted as a public service to residents of the Channel 9 TV viewing area.



C&E December 1975

*Don't Miss Award Winning KWTW Meteorologist Gary England's Weather Spotting School*

## Technical Corner

### ALTERNATE AND EMERGENCY POWER SOURCES

By KC5LOB

As this Winter season inevitably comes to a close, ones thoughts invariably turns to spring. In Oklahoma, spring means a shift in our weather that quite often includes severe storms. Unpredictable weather patterns in our area can, and do, often cause severe thunderstorms and unfortunately, power outages. I have a few ideas about emergency power for communication systems and rechargeable battery packs that I'd like to share.

Rechargeable batteries, NiCads, Gel Cells, Deep Cycle marine, the latest in "Reusable Alkaline" etc, are all classically referred to as secondary Cells. As a power source for hand held transceivers, secondary cells are familiar to most of us. We're all probably aware of their shortcomings as well. Too much time required to charge and too little time to PTT. Owning multiple packs can alleviate both problems and can also empty your hobby budget.

Over the past few years a new hobby has emerged in the Radio Controlled modeling industry. RC auto racing. Besides inhabiting most of the 75Mhz band, this industry is almost solely responsible for technological advances in the NiCad battery. The RC Auto racing hobbyist routinely charges and discharges multi-cell NiCad battery packs at the rate of 3 or 4 times the capacity of the cells! (3C to 4C) Just think of a 1.7 Amp/Hour battery pack that can last for hours and can be recharged in about 20 minutes. As a resource, the technology is there, and reasonably inexpensive. (compared to a \$96 Icom factory battery pack)

The biggest problem with utilizing this resource is packaging. Large capacity secondary cell arrays are also large in size and usually in weight. As a former RC racer, and a new Ham, I had access to several unused packs and a new found need to extend the operating time of my

hand held. Building a pack that attaches to hand held is possible but somewhat ungainly. A cable connected, belt worn pack is much easier to handle. I'm not recommending a power source for everyday use, although it could be, but a device that could be used for contingencies, extra long Nets, or operation of a hand held on an indoor antenna during a thunderstorm or foot mobile during an emergency. The neatest configuration of cells I've found, is to use a shotgun shell "Bandolier" to hold the cells. After each unwired cell is installed (11 cells equals 13.75 VDC) into the loops, I used a nylon and elastic type, the cells can then be connected and covered with vinyl or Naugahyde, I velcro'd mine on for easier maintenance. This pack can be worn fairly comfortably around your waist, or even with a long enough cord tossed over your shoulder.

Almost 2 amp/hours of capacity at your, portable, beck and call. Maintaining and charging such a power pack is another story all in itself. It's surprisigly simple.

Before a high performance Nicad (high capacity, quick charge) battery pack can be assembled several decisions must be made and, of course, the components must be acquired. I say acquired, because I recommend that you check around for most of the required components. They may turn up in strange places that could save you some cash. RC Auto racers use packs usually configured in sets of six cells each at 7.2 VDC. If you know a RC car fan, or are one, then all you would need to do to get started is to put a power cable and connector on a pack and slip it in your pocket.

First the decisions. You must decide how many cells You want to use, and if you want to build your pack in a block type configuration or use the Bandolier idea. I really enjoy the bandolier configuration because it is easily handled and versatile. The number of cells that you use will drive your charging system requirements. The block type configuration entails only stacking up the number of cells that you want to use and secure them together with super glue, or better still silicone sealant. Be sure to align the cells in a

configuration that facilitates series connections. The interconnections must be as short as possible and capable of carrying 4-6 amps.

The bandolier configuration, on the other hand, will have all of it's cells secured into the shell loops and interconnected in series and yet must remain flexible. I simply slipped the cells into the shell loops of a nylon bandolier that has elastic loops and put a drop of super glue near the edge of the elastic at both ends of the cell. A high quality, fine stranded 12ga wire is available at the RC Auto store but is pretty expensive. I have successfully used braid scavenged from an old but clean piece of coax. One word of caution here though, High reliability soldering should be used on braided conductors. If You don't already have anti - wicking tweezers or heat sinks, then make a set for this project. You'll find lots of uses for them later in your shack. When the braid is soldered to the cell connections you must not allow the solder to wick up into the braid very far or flexibility will be impaired and the strains could eventually break the braid. If you are skilled enough as a solderer, even cells without solder tabs can be used.

The ONLY cell that you should use and quick charge is a NiCad cell called the "SUB C". This is the standard of the RC Car industry and is smaller in every dimension than a C sized dry cell. Hence the name Sub C. Aerospace quality 1700 mA/H cells are available and moderately expensive but can radically out perform standard 1200 mA/H cells. Best to check in with a local RC Car race track for these cells. It must be stressed that the correct cells be used if you intend to quick charge. Sub C cells have a self sealing vent that will prevent excessive pressures from occurring during a quick charge and or discharge.

The techniques and equipment that are used to quick charge Sub C cells may seem unusual at first. years of RC Auto racing and thousands of hours of practice have advanced NiCad technology, in some ways, ahead of the rest of the electronics world. The RC car industry has a large variety of charging systems available.

145.210 146.670  
**MORI**  
 146.925 444.100

Mid - Oklahoma Repeater Inc.

MORI MINUTES:

3 JANUARY 1995

The meeting was Called to Order at 7:21 p.m. by Scott, N5NYS, with 24 members Present (representing 9% of the membership). Visitors and Guests were Robert, KB5UJM, Penny Speck, Linda Graham, Chuck, K5NK, and his wife, Sue.

A drawing was held for a Ham Holiday T-shirt from the "Joe Harding Memorial Scholarship" Fund Collection by Jim, N5BEQ. The winner was Jack, KC5KXH.

The minutes of the December 1994 meeting and the Treasurer's Report were accepted as distributed.

Mike, KI5DF, presented the interest/survey forms for attendees and announced an informative/organizing gathering is scheduled at The American Red Cross Chapter Building at 6:30pm., on Thursday the 15th of January.

Reports: CORA- Committee members: Garland, NQ5Y, Rick, N5WNR, Tim, N5USM, Forrest, N5VWF, Farrell, KB5TOM, Jerry, KB8LXR, and Scott, N5NYS presented their report.

VEC- Toy, AB5ET, Reports the scheduled exam session for 1 January 1995 was postponed to January 8, at KOMA/KRXO Studios in Moore, OK, at 2:00pm.

Technical- Martin, KN6UG, reports the 220-Mhz machine is up and sharing the autopatch phone line with 146.07/67 but doesn't overrides it. The 145.21 machine encodes its own sub-audible tone and there will soon be a new UHF repeater on the air.

Collector and Emitter, February 1995

Old Business: Martin, KN6UG, Distributed and explained a report of cost breakdowns of the one time Club Newsletter mailing last Fall.

On Motion from Garland, NQ5Y, with Second by Mike, KI5DF, it was agreed, with one opposed, to implement the Committee's Recommendation to remove the CORA subscription form from MORI applications and to separate the club's dues from collections for subscriptions to the CORA Collector and Emitter, as required by Postal Regulations, in a two-tiered plan with effective dates of January 1, 1995 for current Members who have paid dues in the short term of one year and January 1, 1996 to Pro-rate those who have paid for any longer term thus requiring two renewal payments for dues and the C&E.

There being no New Business, the meeting was adjourned at 9:45pm. The next meeting is scheduled for 7 February 1995, at the usual time and place.

Secretary, Jim, N5BEQ

**Technical Corner (Con't)**

From extremely simple and inexpensive DC powered devices, to state of the art, sophisticated and versatile, and expensive, pulse chargers.

Manual quick charging, that is, quick charging that is not done by a charging system designed and marketed to do quick charges, can be very hazardous if you make a mistake or are inattentive. The author of this article and the operators of this newsletter can not be held responsible for some one else's negligence.

Regardless of what type of charging system you use several things must happen. A high performance NiCad pack must not be discharged so far as to unbalance the state of charge of any of the cells. Successful operation and lifetime of a NiCad pack depends on all the cells in the array being matched or balanced in performance. During quick charging of a battery pack, current MUST be limited to 5 Amps DC. A short duration surge to about 6 Amps may be tolerated during the

first 15 to 30 seconds of the quick charge but the current should be adjusted to 5 Amps at the 30 second point and then left to drift down as the pack charges. Be VERY conservative at first until both you and the pack get broken in to the routine. DO NOT USE A Power supply with ANY FORM of regulation.

A very successful (and inexpensive) quick charger sold by a first rate RC car company consists of 36 inches of 1/16 inch plastic coated steel Aircraft control cable, a pack connector, large alligator clips and an automobile battery. This system uses the resistance of the steel cable to dissipate excess power, as heat, and control the current exchange from auto battery to NiCad pack. One needs only to measure current carefully with an Ampmeter at first to adjust the length of the cables and then use a stop watch to measure 15 minutes and disconnect, or watch a voltmeter connected to the NiCad pack for a "Peak" in the voltage of the NiCad pack. A pack that is in good condition will get slightly warm to the touch and will show a well defined peak in its voltage as it reaches full capacity. After the peak voltage is reached it's all downhill from there. DON'T OVER CHARGE. The voltage of the pack will drop off rapidly and damage to the cells will soon begin. Excessive overcharging will generate copious amounts of heat and pressure in the pack.

My favorite charging system uses a shack-built ampmeter, a full wave 25 Amp bridge rectifier with 500uf filter capacitor and a 10 Amp variable transformer. I have also used a shack-built expanded scale voltmeter to observe the charge peak. Any 4 1/2 digit VOM will work nearly as well. With this system I can charge, at any rate up to 20 ADC, a serial string of up to 40 cells. (50VDC pack in one of My model Aircraft)

A high capacity, high performance, belt or bandolier NiCad pack could make a difference during extend communications indoors during a thunderstorm or foot mobile during an emergency. High Tech Sub C packs and quick charging can facilitate this valuable addition to your shack.

## PACKET BBS NEWS

This column was suggested by Mac, K2GKK for those of us who use Packet radio and Packet BBSs. Any BBS Control Ops having news of their BBSs please forward their inputs to me at K2GKK-4 or K5JB. Please this section is to assist persons in operating your BBS not to advertise it. Thank you.

*The Editor*

### K2GKK-4 News

#### New Sub-directory for Keps

I have added an exclusive sub-directory to the BBS for retention of Keplerian element data bulletins. Previously these bulletins were automatically transferred to the S (Space) sub-directory along with AMSAT News Service (ANS-###.##), ARRL Space (ARLS###), and quite a few non specific bulletins. This made for a very crowded directory so I have broken out the Keplerian bulletins from the general space bulletins in this manner.

If you wish to find the "older" space and Keplerian bulletins that have been moved to the files directories, use appropriate command:

W S (for SPACE)  
or W K (for Keplerian data)

To "DOWNLOAD" these files, use the D command as follows:

D S/filename  
or D K/filename

Remember to have your BUFFER, SAVE, or PRINT functions turn on as there is no pause each 20 lines when downloading. The pause every 20 lines works ONLY when READING mail.

73 de Mac/K2GKK (SysOp)

#### "Mass" Thank You Bulletins

Recently, there have been quite a few "THANK YOU" bulletins addressed TO ALL @ ALLUS from individuals who have requested and received help on one subject or another through packet. This is equivalent to a newly married couple substituting a classified ad in the local

paper for the individual (and specific) thank-you notes that etiquette and courtesy DEMAND that they send in response to the gifts they have received.

If you request help and get it, EACH individual who provided that help should get an individual and personal response/thanks. If you are not willing to do that, keep your requests for help local. The folks who took THEIR time to answer your request DESERVE equal amounts of YOUR time and effort.

The apparently widespread use of shotgun BULLETINS instead of the personal thank-you messages that are deserved contribute to a general and growing unwillingness on the part of many amateurs to respond to help requests.

Think about it. 73 de Mac/K2GKK @ K2GKK.#OKC.OK.USA.NA

### Ham Happenings in the Oklahoma Area

VE Exams, Social Gatherings, Hamfests, Licensing Classes and other Events:

VE exams on 3rd Monday of each month sponsored by C.O.R.A. 1800 @ Salvation Army HQ at NW 50th and N. Penn, Oklahoma City.

VE exams on 3rd Saturday of each month are held at 0900 in Math Science building at Rose State College in Midwest City.

VE exams on 1st Sunday of each month sponsored by M.O.R.I. 1400 @ radio station KOMA, 820 SW 4th Street, Moore, OK

VE exams on 4th Tuesday of each month are held at 1800 in the Shawnee Public Library, 101 N. Philadelphia.

VE exams on 2nd Saturday of each month sponsored by SCARS are held at 1000 at Red Cross in Norman.

VE exams on 4th Saturday of each month are held at the Wilson Center in Altus, OK, times are 1830 for code and 1900 for theory.

Hams on the Southeast side of Oklahoma City meet at various locations for lunch on

Tuesdays from 11:00 - 12:00 a.m., to find out where they meet listen to 146.22/82.

Hams from all over Oklahoma City meet at various locations for lunch on Thursdays at 11:00 a.m., to find the lunch location of the day listen to 146.22/82.

Hams from around the central Oklahoma area meet Fridays at 7:00 for supper, coffee, friendship and overall story telling at the Skyline Restaurant, on 15th and Eastern in Oklahoma City.

MORI sponsors a transmitter hunt each week, alternating between north and south Oklahoma City at 7:00 p.m.. The hunt frequency is 147.470MHz. Check on the 146.07/67 machine for the hunt announcement.

Edmond area amateurs meet each Saturdays, 8:30 a.m. for breakfast and coffee at Gambill's Country Kitchen 2826 East 2nd Street Edmond, OK

### On the Air

Listings of Nets on local repeaters or sponsored by CORA members:

**ARES** - Oklahoma County Thursdays @ 8:00 p.m. on 146.22/82.

Packet check-in on 145.07

**Salvation Army** - Second Saturday of the month @ 8:00 a.m. on 146.22/82.

HF 3900kHz; Packet 145.07

**AMTOR** @ 8:30 a.m. 14.064MHz

**Night Owl** - Daily @ 10:30 p.m. on 146.07/67 with alternate 146.325/925.

**OKC Swap-n-Shop** - Saturdays @ 10:00 a.m. on 146.22/82.

**Geritol** - Daily @ 8:00 a.m. on 145.41 minus input.

**Edmond Info** - Mondays @ 7:00 p.m. on 147.135/735.

**QCWA Chp 63 VHF** - Thursdays @ 7:00 p.m. on 145.41 minus input.

**QCWA Chp 63 HF** - Sundays @ 8:00 on 3856.5kHz.

**Wheatstraw** - Wednesdays @ 9:00 p.m. on 146.01/61.

**Purcell** - Mondays @ 8:00 on 145.19 minus input.

**Cimmaron** - Tuesdays @ 9:00 p.m. on 145.45 minus input.

## S. C. A. R. S. NEWS

South Canadian Amateur Radio Society

### S.C.A.R.S. HOLDS FIRST MEETING OF THE YEAR

S.C.A.R.S. members met at the Red Cross on January 14th to hold their first meeting of the year. Don, KJ5KB opened the meeting, late again, at around 9:43 a.m. Each person gave their name and callsign as we have done in the past. About 45 people were present, with about eight or so people taking tests for their ham license.

#### Treasury Report--

Bill, N5UMH gave the treasury report. Bill collected a lot of dues and if any member, hasn't paid their dues or have a question about the dues, give Bill a call so he can answer your question or questions.

Some of the people that ordered jackets, haven't picked them up. Will need to see Bill about that also. Bill explained some of the new regulations pertaining to the mailing of the C&E and it seems that as of now we don't have to sign those forms to receive the C&E in the mail. Also, if any new member or other members that didn't get in on this last order of jackets, there is another new list being started and if anyone is interested get in touch with either Mike, N5SOF or Bill and they can add your name to the list. There is several styles and colors available. When ordering a jacket, make sure you understand what is available and make yourself clear as to what you want, this does make things a little easier.

#### Radio Report--

Ken was out of town but he did leave me some information about the receivers and repeaters. The UHF machine seems to be holding its own and is working as well as can be expected. Ken said he did find some water in the coax that feeds the .06 machine and had gone out to drain it

several times in the past but still didn't know where the water was coming in from. Ken thinks now that it turns out this older Andrew heliax has a spiral outer copper shield which when is ingressed with water is sucked right to the bottom connector. This has been fixed and a small drain hole in a drip loop has allowed the water to go away. Also, Ken and N5KBR cleaned up the cable connector after the water had made it tarnish some. The Master II mobile we bought for parts has been raided for the 100 watt amplifier board and a very hot receive pre-amp, which is now in service. Our repeater is hearing like the old days with ht's getting in from OKC, Moore, Purcell and Blanchard. Ken says "Thanks for everyone bearing with me while I had made the 20 or so trips and shut down times that comes with the troubles we have had."

P.S.: the 146.46 OU campus receiver has the tone access on most of the time. It is working well also. The tone again is 141.3.

#### Hear Ye! Hear Ye! Hear Ye!

Roger, KC5ILL (what a call sign for a person in the medical field) has taken it on his own to bring us Amateur News Line. This program is for and about ham radio operators and Roger said he would be responsible for getting it on the air. The club voted on it to allow Roger to broadcast the News Line on Tuesday nights at 9:00 p.m. on 147.06. Hopefully Roger can have all of the necessary problems worked out and on the air by no later than Jan 23rd. Everyone can support Roger and his effort by tuning in on Tuesday nights at 9 p.m.

#### Field Day?

June is still about 6 months away, but the discussion of reserving one of the pavilions at Reeves Park. A committee was formed with Louis, KC5ABI, leading the way.

#### Mystery Guest . . .

. . . no not really. It was Howard, N5HZU. Howard is the local computer guru and

one of the steadies for gathering for lunch bunch. Some of the other members don't need to be a mystery guest and show up often and support the club.

#### Drawing . . .

Don, KJ5KB stopped long enough Friday to pick up some speakers and a used, very used that is, dumb terminal. I didn't get the name of the young man who won the speakers, but ye ole editor won the terminal and before I could get the prize in hand, Ed, N5US came by and wanted it and I let him take it off of my hands. I'm still waiting for the big one!

#### New Hams--

S.C.A.R.S. wants to thank all of the new hams for joining our club and if someone doesn't seem friendly and if you have a question, make the first move and come up to one of us and introduce yourself and get acquainted. And S.C.A.R.S. members take the time and make everyone welcome.!

Meeting adjourned sometime after 10 a.m.

-30-  
Keith  
KB5FCI

### N5VWF Cryptoquote

One letter stands for another; words single letters, punctuation and sentence structure are all clues.

Qhrmji Ljfc Vora: Mrsikt wjkq kv  
ioqkawg kv rtq.  
(Solution: Toucan live as cheaply as one.)

Cryptoclans: Each list contains related items; word structure and single letters are clues.

Examples: Alpha = Eagle

#### Amateur Radio

1. Roy qzyhrn
2. Zfozn
3. Prklrnl
4. Kzoohvqzufxqn
5. Lzfhrizo
6. Vroohlh
8. Kzttxqoely





## A. R. R. L. Bulletins

From Arrl Headquarters  
Newington CT

Provided by Mac, K2GKK and Judy,  
KA5BJS.

### ARRL Bulletin 1 January 4, 1995

#### IARU Fills Satellite Post

Bruce Lockhart, SM0TER, has been named IARU Satellite Frequency Coordinator, whose (volunteer) job will be to coordinate frequencies and emissions of planned amateur satellites with existing and planned amateur satellites. The appointment was made in consultation with major AMSAT groups in Europe and North America.

Lockhart also will maintain records of frequencies and emissions of all operating and planned amateur satellites and provide advice on suitable frequencies and modes for planned amateur satellites, based on existing and planned usage of the amateur satellite bands and the IARU band plans.

While this is a technical position, the satellite frequency Coordinator position also assists in the protection of bands allocated to the amateur satellite service. Lockhart will work closely with IARU Satellite advisor Pens van de Groenendaal, ZS5AKV.

Lockhart, an engineer, is self-employed as an international consultant in the process control industry. He was first licensed as K3ZAQ in 1963 and has operated on all bands from 1.8 MHz to 2.4 Ghz. He is a member and Technical Secretary of AMSAT-SM, is a member of AMSAT-UK and AMSAT-NA, and is known in the amateur satellite community as the original designer of the Trakbox.

In September the Administrative Council eliminated the position of Satellite Coordinator and created two in its place: Satellite Advisor and Satellite Frequency Coordinator.

SM0TER's address is: Bruce C. Lockhart,  
Rymdgatan 56, S 195 55 Marsta. Sweden.  
E-mail: blockhart at ccontrol.se

### ARRL Bulletin 2 January 12, 1995

The ARRL has filed reply comments on an FCC Notice of Proposed Rule Making, in ET Docket 94-32, a proposal to reallocate a block of spectrum from federal government to commercial use. Some of that block includes parts of the 2400-MHz band shared by Amateur Radio on a secondary basis with the government.

In earlier comments, the ARRL asked that the Amateur Service be given primary allocation status at 2402 to 2417 MHz, that it be given at least co-primary status at 2390 to 2400 MHz, and said it would be desirable to make the entire segment 2390 to 2450 Mhz amateur primary.

In its reply comments, the ARRL said that most of the comments filed by others in December didn't respond to FCC questions regarding the compatibility of the proposed commercial services with the Amateur Service.

The League said that the bulk of comments filed were "absolutely silent" on the effect of a new proposed use, either from 2390 to 2400 MHz or from 2402 to 2417 MHz, on the Amateur Service, with the exceptions of comments by In-Flight Phone Corporation and Apple Computer, both of whom suggested ways of coexisting with amateurs.

The ARRL called the use of competitive bidding in this case "a means of avoiding specific allocation planning by the Commission" and said it was inappropriate. The FCC's "flexible allocation" plan would be, on its face, the League said, "in lieu of making any public interest determination at all as to the highest and best use of the spectrum."

That highest and best use, the League said, was Amateur Radio.

More information was in January 1995 QST, page 91.

### ARRL Bulletin 4 January 18, 1995

#### Spectrum Changes

The FCC has voted to allocate spectrum from 2310 to 2360 MHz for satellite Digital Audio Radio Services (DARS).

This band is part of spectrum from 2300 to 2450 MHz, all of which is currently allocated to the amateur and amateur satellite services in International Telecommunication Union Region 2, on a secondary basis, with the exception of 2310 to 2390 MHz, which is not allocated to amateurs.

The FCC said the new DARS would allow direct satellite-to-ground radio to areas of the country and to minority and ethnic groups that are inadequately served by traditional, "terrestrial" radio.

The Commission said that service and licensing rules for the new allocation would be addressed in a later rule making. This was action in FCC General Docket 90-357.

### ARRL Bulletin 5 January 20, 1995

#### Notice of False WIAW/ARRL Special Bulletin

A message purporting to be Official WIAW Bulletin ARLX004 falsely claimed that the American Radio Relay League, ARRL, plans to petition the Federal Communications Commission, FCC, to drop all Morse code requirements for amateur radio licenses in the U.S. An authentic ARRL bulletin apparently was altered and re-posted on an Internet news group as a practical joke. The League plans no such petition. The actual bulletin ARLX004 concerned a balloon launch from Iowa. The League views any dissemination of forged messages as an extremely serious matter.



**ARRL Bulletin 3**  
January 18, 1995

**FCC-issued Call Sign Update**

The following is a list of the FCC's most recently issued call signs as of January 1.

District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	AA0VB	KG0SL	++	KB0QDK
1	AA1LQ	KD1YQ	N1TYE	KB1BMP
2	AA2VD	KF2ZP	++	KB2SZC
3	AA3JO	KE3QT	N3UDE	KB3BGA
4	AE4BG	KS4KC	++	KE4UEJ
5	AB5ZL	KK5HL	++	KC5LSC
6	AC6IR	KO6NL	++	KE6PQB
7	AB7HD	KJ7HC	++	KC7HWL
8	AA8RS	KG8NW	++	KB8WEE
9	AA9NM	KF9ZO	N9ZQK	KB9JCB
N. Mariana	KH0O	++	KH0DP	++
Guam	WH2J	AH2CZ	KH2LP	++
Midway	++	AH4AA	KH4AG	WH4AAH
Hawaii	++	AH6NS	WH6ZY	WH6CRY
Amer. Samoa	AH8M	AH8AH	KH8BJ	WH8ABB
Alaska	++	AL7PW	WL7ZY	WL7CJD
Virgin Is.	WP2Q	KP2CD	NP2HV	WP2AHV
Puerto Rico	++	KP4YH	++	WP4MVN

++ All call signs in this group have been issued in this area.

**ARRL Bulletin 6**  
January 24, 1995

**Hams Aid Japan Relief**

More than 200 amateurs are providing communication in the Kobe, Japan area following an earthquake on January 16 that killed more than 5000 people and left tens of thousands homeless.

Amateur radio is being used to connect relief centers and to exchange information on road conditions and traffic, the health, welfare, and whereabouts of residents and the availability of water and food, according to the Japan Amateur Radio League.

The JARL and the Japan Amateur Radio Equipment Industry Association (JAIA) are conducting the effort, at the request of the Ministry of Posts and Telecommunications. 200 hand-held transceivers for 430 and 1260 MHz, as well as three repeater stations, were supplied by JAIA member companies for the operation. Each portable station has been assigned a special call sign -- 8J3AAA, 8J3AAB, and so on.

JA3YRL in Kobe serves as communication coordinator, while JA3RL, at the JARL's Osaka office, monitors the activity.

400 of the 600 relief centers (with a total of 240,000 evacuees) are not being served by this communication system, and the JARL is considering equipping at least half of them with amateur stations.

**ARRL Bulletin 7**  
January 25, 1995

The FCC has announced its intention to implement a vanity call sign program, and also to resume the issuance of club and military recreation station licenses. In a January 24 news release, the Commission released a general outline of the new program.

Amateurs will be eligible to apply for a call sign of their choice in four "gates." The first group eligible to apply will be previous holders of a call sign or the close relative of a previous holder of an amateur call sign who is deceased. The second group will be Amateur Extra Class licensees, then Advanced, then all others. The FCC will announce the opening of each "gate" by public notice.

The FCC said that the first gate will open as soon as a new application form, FCC Form 610-V, is available and the Commission's licensing facility is prepared to begin processing the applications -- no sooner than April, according to FCC staff. Applications for club station licenses will be accepted as soon as the FCC's Report and Order on this matter is released. Club station call signs will be issued systematically, unless under the fourth "gate" the trustee of an existing club station applies for the call sign of a deceased member as a vanity call sign for the club.

The fee for the use of vanity call signs will be \$7 per year or \$70 for a ten year license term according to Wireless Telecommunication Bureau staff. However, on January 12, 1995, in a Notice of Proposed Rule Making, the FCC proposed a fee of \$3 per year, for fiscal year 1995 (which began October 1, 1994).

Amateurs will be able to list up to 25 call sign choices, from any call area, FCC staff said. It is expected that it will be several weeks before the new Form 610-V is approved.

More information was in July 1994 QST, page 84; June QST, page 81; and February QST, page 84. (PR Docket 93-305).

## FIELD DAY PR TIPS

25 Easy Ways to "Show Up Big Time" On Field Day - by Steve Mansfield, N1MZA ARRL Manager of Legislative & Public Affairs - from QSO Media, May 1994 (condensed for this bulletin by originator)

Sure, Field Day is interesting enough for you. But for non-hams, it sometimes takes a bit of public relations to tell the story about this important event. Good public relations starts with creative ideas.

Between now and June 25, consider brainstorming with members of your club to come up with new ideas to make Amateur Radio Week (the week leading up to Field Day) interesting even for non-hams who don't know a dip meter from a dipole. Here are 25 ideas we generated at headquarters just to help you get your creative juices flowing. Mix, match, cut, paste and come up with your own ideas to generate coverage:

1. Send press releases to your local paper.
2. Invite a reporter.
3. Do something strange.
4. Do something visual.
5. Do something that helps somebody.
6. Invite the mayor or other officials.
7. Get somebody to proclaim something.
8. Hang your banners high!
9. Throw a block party.
10. Show your "club colors"
11. Work with the library.
12. Write a letter to the editor.
13. Work with Scouts.
14. Talk with Schools.
15. Talk with senior groups.
16. Talk with church groups.
17. Write a story for your company newsletter.
18. Put flyers in the local radio store.
19. Place notices on "community bulletin boards."
20. Get on talk shows. Then talk!
21. Provide "media advisories" to local radio and TV news.
22. Put your local newspaper editor on your club newsletter mailing list.
23. Set up a QSL card display at the local mall.
24. Write an article for your weekly paper, your daily paper!
25. If all else fails, buy an ad.

## CAN YOU REMEMBER WHEN ?

(IF SO, THEN YOU ARE AN OLD TIMER)

THE RADIOTELEGRAPH SYMBOL FOR PERIOD WAS "DIT DIT DIT DIT DIT DIT"? (YES, THAT ODD SPACING IS INTENTIONAL)

THE RADIOTELEGRAPH SYMBOL FOR "WARNING: HIGH POWER" (AND ALSO THE EXCLAMATION POINT) WAS "DAH DAH DIT DIT DAH DAH" . . . . AND OPERATORS USED TO SOUND IT ON THEIR AUTOMOBILE HORNS WHEN THEY WANTED TO CLEAR TRAFFIC.

"HELIX" WAS A COMMON TERM IN CONVERSATIONS AMONG AMATEURS. ( IT REFERED TO THE SINGLE LAYER, WIDE SPACED, AIR - DIELECTRIC, LARGE - WIRE COIL THAT SERVED AS THE SOLE TUNING ELEMENT IN A TRANSMITTER.

QST PUSHED ESPERANTO AS AN INTERNATIONAL LANGUAGE FOR AMATEUR RADIO AND RAN LESSONS.

NATIONALITY - DESIGNATING PREFIXES WERE NOT APPENDED TO CALLS AND A STAB AT REDUCING CONFUSION WAS MADE BY HAVING "DE" REPLACED BY UNOFFICIAL DESIGNATORS. IF CANADIAN 1AA WANTED TO CALL UNITED STATES 1AA HE WOULD CALL "1AA UC 1AA".

QST WAS 35 YEARS AHEAD OF TIME IN ADVOCATING THE USE OF "PICO FARAD" IN PLACE OF "MICROMICROFARAD"

"WIRELESS" WAS RUNNING NECK - TO NECK WITH "RADIO" AS THE POPULAR TERM FOR THIS AVOCATION OF OURS.

THE STANDARD CIRCUIT FOR A VACUUM - TUBE RECEIVER WAS THE THREE - CIRCUIT REGENTIVE USING A VARIOCOUPLER AND TWO VARIOMETERS. THE TUBE OF COURSE, WAS A "SOFT" TUBE WHICH REQUIRED A VERNIER RHEOSTAT ON THE FILAMENT (ONE AMPERE AT FIVE VOLTS) AND A TAPPED "B" BATTERY (18 TO 22.5 VOLTS IN 1.5 VOLT STEPS) ON THE PLATE.

AN AMATEUR HAVING ONLY A SINGLE WIRE IN THE FLATTOP PORTION OF HIS ANTENNA WAS CONSIDERED EITHER VERY IGNORANT

OR VERY LAZY. A FOUR WIRE FLATTOP WAS STANDARD.

BROADCAST LISTENERS USED TO BUILD THEIR OWN RECEIVERS.

ANTENNAS WERE ALL SO HIGH AND SO LONG YOU COULDN'T TELL A BCL FROM AN AMATEUR EXCEPT FOR THE GUY WIRE INSULATORS . . . . (ONLY AMATEURS USED THEM).

BALDWIN HEADPHONES WERE RATED AS "EQUAL TO ANOTHER STAGE OF AMPLIFICATION" AND EVERY AMATEUR DREAMED OF OWNING A PAIR . . . . ESPECIALLY THE TYPE G "ANTI - STATIC" MODEL THAT SOLD FOR \$16.00.

S. G. BROWN TUNED - REED HEADPHONES, IMPORTED FROM ENGLAND, WERE THE ONLY ONES DEEMED COMPETITIVE WITH BALDWIN'S.

NO TETRODES WERE MANUFACTURED IN THE UNITED STATES AND ONLY A FEW FORTUNATE AMATEURS WERE ABLE TO OBTAIN IMPORTED PHILLIPS VALVES FOR EXPERIMENTING WITH THE "UNIDYNE" CIRCUIT.

THE DOUBLE - ENDED MYERS TUBES WERE MADE IN CANADA TO CIRCUMVENT RCS'S MONOPOLY.

A WELL EQUIPED AMATEUR STATION INCLUDED A RECEIVER WITH A TUNING RANGE OF 150 TO 30,000 METERS (LO KHZ TO 3 MHZ)

GREBE, PARAGON, COLLIN B. KENNEDY, DE FORREST, AND TUSKA WERE THE NAMES OF RECEIVERS AMATEURS DREAMED OF OWNING "WHEN THEY GOT RICH".

IF AN AMATEUR HAD A VT-1 OR A VT-2 IN HIS STATION THE PROBABILITIES WERE HEAVY THAT THE TUBE WAS STOLEN FROM THE SIGNAL CORPS.

EVERY AMATEUR KNEW WHAT YOU WERE TALKING ABOUT WHEN YOU SAID YOUR LOOSE COUPLER HAD "UNITS AND TENS" SWITCHES.

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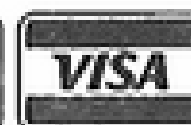


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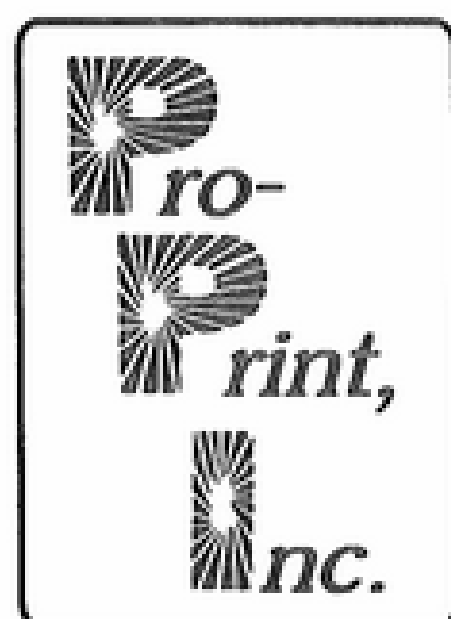
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## February 1, 1995 to March 4, 1995 Schedule of Events:

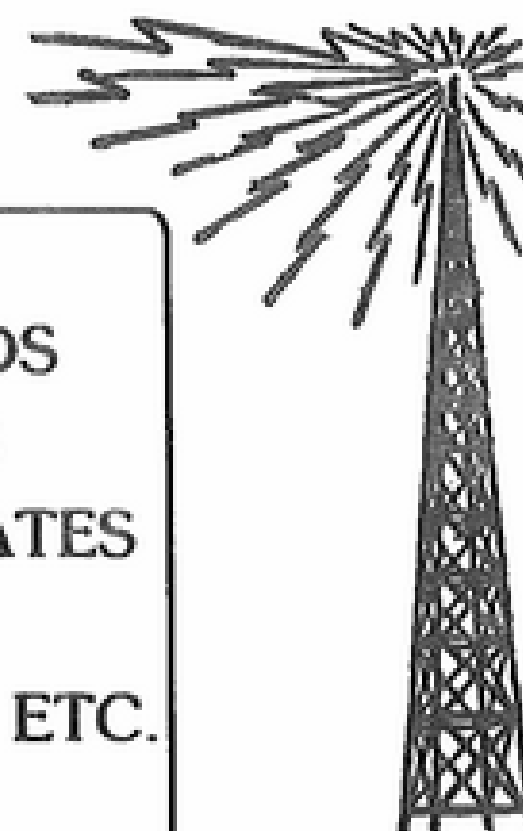
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2 7:00 p.m. Aeronautical Center 7:30 p.m. CARA	3	4
5 2:15 p.m. Great Plains	6	7 7:00 p.m. MORI	8	9 7:30 p.m. Altus Assn	10	11 9:30 a.m. SCARS 10:00 a.m. SCARS VE Exams
12 2:00 p.m. Mori VE Exams 2:30 p.m. Wheatstraw	13 7:00 p.m. EARC	14	15	16	17 Dinner Meeting EARS	18 9:00 a.m. VE Exams (RSC) 11:00 a.m. VHF Club
19	20 6:00 p.m. CORA VE Exams	21 7:30 p.m. OCAPA	22	23	24 C&E Deadline	25
26	27	28 7:00 p.m. Shawnee VE Exams 7:30 p.m. CORA	1	2 7:00 p.m. Aeronautical Center 7:30 p.m. CARS	3	4



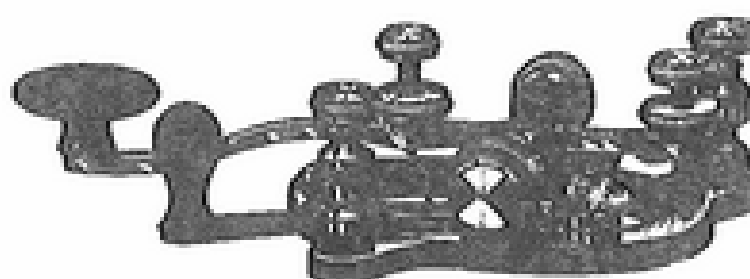
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**Jim Kelly, WA5LKS**



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