

Collector & Emitter

A CORA Publication

March 1995

Volume 21, Number 03

Issue 241

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Postmaster See Page 2
For Postal Information

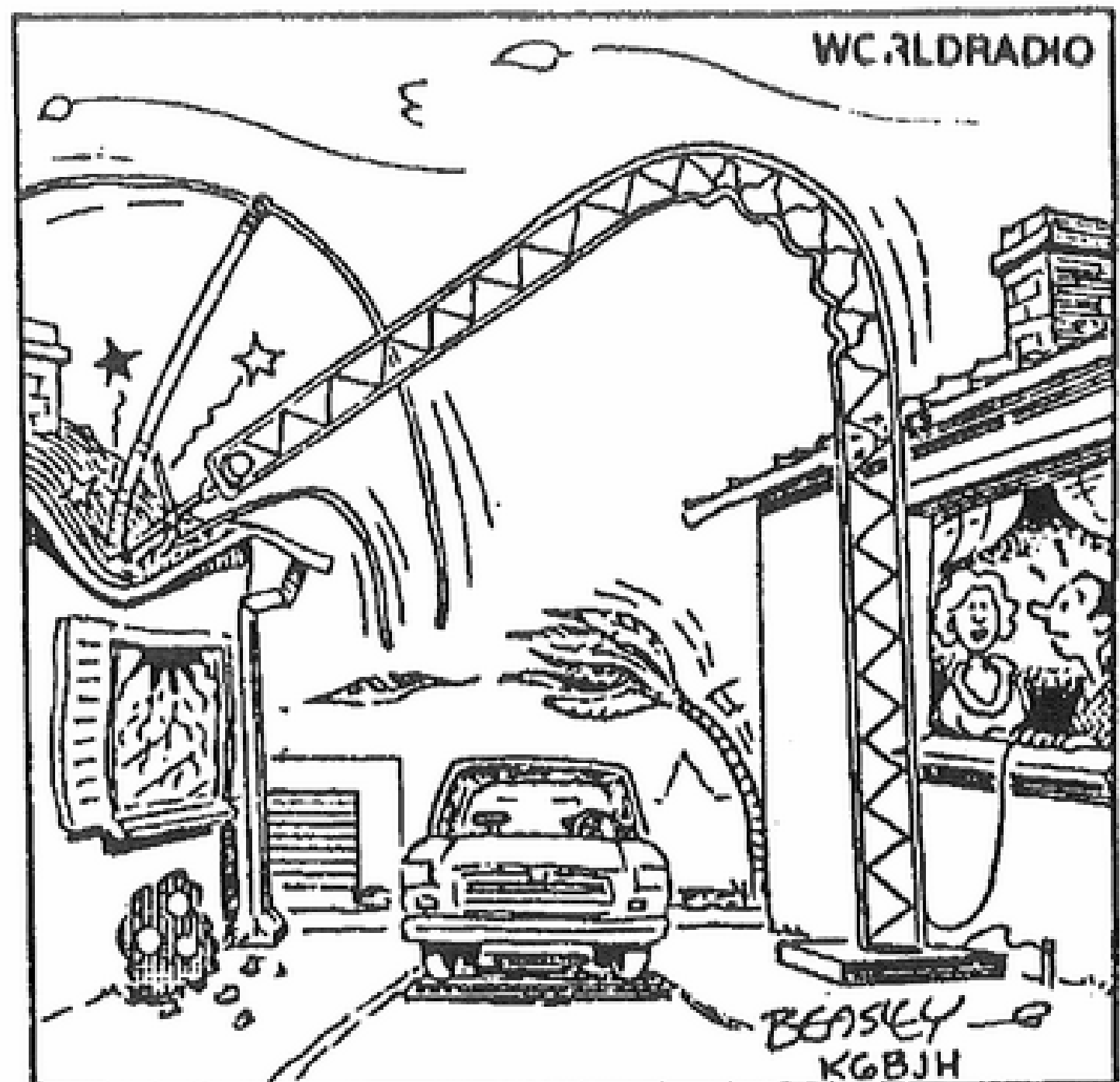
Second Class Mail

**Is Your Autopatch Phone Bill Too High?
Good News Is On The Way**

"Vanity" Call Signs To Be Released Soon

See ARRL Bulletin #11

A Look Into CORA's Past



**I NEVER REALIZED THAT YOU HAD A TILT-OVER
TOWER!**

Word Search and Cryptoquotes

Edith Vaughn, KA5YPX

Are You As Involved In Amateur Radio Public Service

March: In Like a Lion, Out Like a Lamb?

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 C&E subscription expires. 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.

March 1995**VOL. 21, No 03, Issue 241****Collector and Emitter****(USPS 116-150)**

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1. Aeronautical Center ARC 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:	11. Edmond Amateur Radio Society 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
2. Oklahoma Central VHF ARC Meets: 1100L, 3rd Saturday, Neighbor's Restaurant 3401 N. Classen Blvd, OKC Pres: Jackelyn Olsen, KA5ENU VP: Ken Eason, KF5JS Sec: Joe Buswell, K5JB 732-0676 Treas: Ellard Foster, W5KE 789-6702 Editor: Joe Buswell, K5JB 732-0676	14. Cimmaron Amateur Radio Assn. 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
3. Mid-Oklahoma Repeater, Inc. Meets: 1900L, 1st Tuesday, Favorite's Cafe, 36th and S. Western, OKC Pres: Scott Walsh, N5NYS 787-3804 VP: Rick Masters, N5WNR Sec: Jim Buswell, N5BEQ Treas: Craig Cornwall, N5VIS Editor: Dean Ward, N0PAD 681-4606	15. South Canadian ARS Meets: 0930L, 2nd Saturday, Red Cross Bldg North OU Campus, Norman Pres: Don, KJ5KB 321-1673 VP: Mike Winkel, N5SOF 366-8639 Sec: Keith, KB5FCI 329-2213 Treas: Bill, N5UMH
4. Oklahoma City Autopatch Assn. 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	Support Ham Radio Do You Know of A Club That Does Not Belong to CORA? Let's Make CORA Grow!!!!
9. Wheatstraw Amateur Radio Club 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	Central Oklahoma Radio Amateurs Meets: 1930L, 4th Tuesday, Salvation Army Bldg N.W. 50th and Penn, OKC (Back Door) 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

Notes on your Mailing Label: The Label on the front of your C&E has some useful info on them. First are the Clubs you belong to example: 1 - means ACARC and so on. The date shows when your subscription to the Collector and Emitter expires. The number on the top right is the mailing zone. The rest is self explanatory. Please forward all address corrections as soon as possible to help us get your C&E to you.

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PLEASE PRINT

I _____ Call _____
NAME

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 (CORA Associate Only Paid with Dues To Supporting Club.)
☐ \$7.00 for Individual Subscription to Collector and Emitter (Funds sent directly to C&E)

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

Subscription prices are as follows: CORA Associate: \$4.80 per year paid by supporting clubs. Individual Subscription mailed to C&E: \$7.00 per year regardless of club affiliation. Please fill out all the information on the slip. Dates and Amount paid are 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.

Individual subscriptions are not members of CORA. CORA Membership is by clubs, not individuals.

Thank you for your assistance.

CENTRAL OKLAHOMA RADIO AMATEURS

Minutes of the February 28, 1995 meeting

The meeting was called to order by Chuck K5NK at 7:35pm. Six officers were present and six clubs represented with 24 in total attendance.

The minutes of the January 24 meeting were accepted. The treasurers report for February was accepted.

John, NJ1V, CORA Vice President, read a letter to the group expressing his aggravation with the problems caused by MORI and its leaders. His letter ended with his resignation as a CORA officer. Chuck accepted his letter. Many in the group expressed disappointment in his leaving.

Chuck circulated copies of a letter from MORI to CORA dated February 1, stating MORI's decision to make their membership subscription to the C&E separate from the club membership. The MORI reasoning being a problem in the MORI constitution.

A long discussion developed. The recommendation: that MORI consider correcting their constitution rather than forcing CORA to amend policies that have been in place for many years.

Chuck also read a letter from the leaders of Edmond Amateur Radio Club (EARC) withdrawing their membership from CORA.

Charlie, WA5JGU announced plans for a QCWA luncheon for Saturday during Ham Holiday.

HAM HOLIDAY 95

The prize committee was budgeted \$2000 for the grand and pre-registration prizes. With some research and discussion, the recommendation was that the prizes be set as spending accounts at the local ham store. This will allow the recipient to purchase the things needed in his shack. The prizes are not to be redeemable for cash.

The MORI club, with assurance of their president, wants to be responsible for the non-technical programs at HH95.

A chairman for the technical programs is still needed.

Hal, KB1ZQ got 80+ invitations to dealers ready to mail.

The meeting adjourned at 9:10pm.

John Brassfield
CORA Secretary

John Guida, NJ1V
20801 N. Council Road
Edmond, OK 73003

February 16, 1995

Chuck Wilhite, K5NK
President
Central Oklahoma Radio Amateurs Inc. C. O. R. A.
P. O. Box 95942
Oklahoma City, OK 73143-5942

Dear Chuck:

Since you are a good friend, this is an extremely difficult letter for me to write, but after much thought, I believe it is something I must do.

First let me say that while this letter is addressed to you, to by no means reflects any objectionable feeling toward you, nor do I believe that the conditions that I am reacting to were caused by you. On the contrary, I believe that leadership such as yours is needed at C. O. R. A. if the organization is to succeed.

This letter is in reality written to the membership of C. O. R. A. , and I hope you will make it public at the next meeting, and publish it in the C&E. Based on my observations over the past several months, however I am doubtful that certain "supporting" member organizations of C. O. R. A., such as M. O. R. I., and now another, will help anyone to succeed without great sacrifice and much consternation.

The observations that I reference are those of constant in-fighting concerning the Collector and Emitter that has transpired at several meetings since the beginning of our current term, and the constant barrage of letters relating to membership requirements to C. O. R. A. and subscription conditions for the C&E. It goes without saying that both of these issues appear to have been the constant attention of the M. O. R. I. organization - an obvious attempt to disrupt the business of C. O. R. A. and the financial support of the publication of the C&E.

We are fortunate that Hal Miller, KB1ZQ stepped forward to rescue the C&E along with the assistance from his wife Linda, N1LPN. Given the current circumstances, however, I believe that it is only a matter of time before Hal and Linda will also no longer be willing to accept all of the political baloney that has surrounded the publication since the ill fated Holiday Skier cover of two years ago. Once that happens and the C&E dies, C. O. R. A. will follow shortly thereafter.

Chuck, you and I have become good friends over the last four years, and I believe you are aware of my work ethic and sense of urgency and responsibility in anything that I undertake, be it my family, career, or amateur radio hobby. You are also aware of the many, many hours my job requires, 60 to 65 hours a week as a rule, and the extreme stress that I constantly deal with in the daily performance of my job responsibilities.

Because the amateur radio hobby has been so enjoyable, and has helped in relieving some of the work related stresses, I felt that giving some of myself back to the hobby was something I wanted to do, and have attempted by serving in many volunteer capacities.

Since moving to Oklahoma City in 1990, these included Vice President and President of OCAPA, including writing of regular monthly C&E OCAPA articles for two years, heavy involvement in OCAPA Field Day

exercises including arranging for alternate sites, set-up to tear-down participation and CW operation through the night, and presentation of several programs at OCAPA meetings and Tulsa, Lawton, and Oklahoma City hamfests relating to Dxpedition participation and contesting seminars. I worked for a time as the ARRL Oklahoma Section Affiliated Club Coordinator.

I have attempted to "elmer" many emerging hams, and feel good about two in particular who I helped during their progression from Novice to Extra Class. I have invited interested amateurs, seasoned and beginning to my station to operate in contests and on the HF frequencies in general. I encourage and receive many phone calls from amateurs looking for advice of one type or another.

I am currently serving as the OCAPA/Channel 9 Liaison and the Contest Coordinator for the Oklahoma DX Association. In September 1994, I assumed responsibility for the operation of the DX Packet Cluster serving Central Oklahoma and Linking to other parts of the state, and neighboring Arkansas and Kansas.

Prior to my arrival in Oklahoma City, I was proud to be involved in the planning, installation, and operation of W1AW/5, the ARRL 75th Anniversary Commemorative Station at the 1989 ARRL Diamond Jubilee National Convention at Ham-Com in Arlington, Texas.

As you can see, I am not new to volunteering my services, and have done so willingly and usually with gratifying results. While none of these activities were without issue, I never witnessed the constant demonstration of lack of support and adversity with them that I have observed demonstrated by the M. O. R. I. club during the last several months as a regular C. O. R. A. attendee now Vice-President. I had hoped that I could help in the planning and execution of Ham Holiday while also helping to overcome some of that adversity, but after hearing and witnessing all of the hostilities that are swirling around us, I now feel that continued participation with C. O. R. A. will only add to my level of stress and frustration, and detract from my family and career responsibilities, and interfere with my enjoyment of the great amateur radio hobby. This is no longer fun, and is not something that I want to continue to do.

Although I am a current member of M. O. R. I. (having joined two years ago to primarily attempt to resolve yet another M. O. R. I. related dispute, this time with the OCAPA organization), I do not plan to renew my membership which is due in March 1995. I do not wish to continue to support an organization whose leaders obviously do not understand the meaning of teamwork and community spirit. (Isn't that also what our hobby is about?) Accordingly, I also do not wish to participate in any activity with which they are associated.

As a friend, my personal recommendation to you is that you should not have to put up with all of the crap that is going on! You are too nice a guy, and certainly are not deserving of the kind of things that you are having to deal with.

Please accept this letter as immediate resignation of my office of Vice President of the Central Oklahoma Radio Amateurs.

Respectfully,

John Guida, NJ1V

Bringing The Truth To Light

There is a flap currently going on between the club MORI and CORA. Many fellow hams have asked for the truth and I want to articulate some of facts to correct the rumors, misinformation, and half truths that are circulating. This is not the type article I enjoy writing and hope it will not be necessary to do so again. I am motivated to write this because some individuals, by their actions are disrupting my life, and considerably reducing the enjoyment I receive helping to produce the *C&E*. I have even begun to question if this new breed of hams are our future and do I want to be a part of that community?

In September 1994, CORA's individual club representatives voted into office new officers. The rumor has been that these new officers were all from one club, OCAPA, that OCAPA took over CORA. In the CORA minutes from that meeting (*C&E*, Nov. 94, pg. 3) you can see that this is not true. The new officers were from the following clubs: John, N5SAM, the new secretary was an ACARC rep., the current Treasurer was voted to remain for another year (member of ACARC), John, NJIV Vice President was a MORI rep, and President Chuck, K5NK, was an OCAPA rep. The truth is that some of the new Officers of CORA are multi-club members. Most of the out going Officers of CORA were from the MORI club. The only officer that had someone run against him was Jim, N5BEQ. Many of the representatives that were asked to run for office declined the honor, one was another MORI member.

It all began over 6 months ago when MORI elected into office new officers. Apparently, due to a break down in communication these officers were not given information concerning the offices they now hold nor about CORA and it's policies. They either were apparently unaware of the chain of protocol when they had a question or complaint concerning CORA or apparently did not care to follow it. They took their questions instead to our postal representative,

evidently, misrepresenting themselves. By law the only ones that have the legal right to conduct postal business relating to our 2nd class mailing permit are those who are held directly responsible for it. The ones who are directly held responsible for our mailing permit are the Officers of CORA, the Editor of the *COLLECTOR & EMITTER*, and myself as the Circulation Manager. The individuals who went to the postal representative only presented him with half of the information that was needed so he would be able to respond with factual information.

Subsequently, I have been able to give the postal representative the proper information needed to clear up what, to all outward appearances was a smear job that was directed toward CORA and the *Collector & Emitter*. After he received the right information he was able to see that he had evidently been mislead and as a result had given out the wrong information. The recent changes that we made to comply with postal regulations that directly affected the clubs of CORA was the change in the mailing slips for the *C&E*. Because we accept non-member subscriptions to the *C&E*, we must state the yearly amount for club memberships and the amount per year. The rest had to do with moving the SECOND CLASS POSTAGE to be above the mailing label, name of publication must be most obvious words seen on front cover, and the PS form as seen in October must be readable, these corrections involved the format itself of the newsletter.

So where is the problem? The group that started this apparently asked the postal representative about subscriptions without telling him first how CORA is set up. He responded with information concerning INDIVIDUAL subscriptions but CORA is set up to work on CLUB subscriptions. If an individual wishes to join CORA he can not, he must join a club that is a member of CORA and it is through that club's membership that he becomes a member. When a club joins CORA, it agrees to support any activity sponsored by CORA. The newsletter, *Collector and Emitter*, is a CORA publication that is supported by the clubs, it is a combined newsletter allowing clubs to receive a quality product

for minimum cost. The *C&E* has the right to bill forty cents each month per major member of each club to cover the cost of it's printing and mailing. When a ham joins more than one club and that club belongs to CORA, 40 cents of his dues each month will go toward the *C&E* yet he will receive one news letter per month.

The reason this is possible is the Constitution of CORA and because of the way CORA is set up. No one is forced to receive the newsletter, but the club will still be billed. A person has the rights and freedom to join as many or as few clubs as he wishes to. The *C&E* does accept non-member subscriptions, it's \$7.00 per year. Because we offer non-member subscriptions, we must state on the mailing slips the yearly amount of your dues that goes toward the *C&E*.

All the rumors and half truths that have been circulating for the past few months, causing misunderstandings, anger and frustration within the ham community, is not what being a ham is all about. Even before I was asked to take over as Circulation Manager, I had been trying to dissolve the anger that had been created over mishandling of problems, some went back to two years ago (all created by those that came before the current Officers of CORA). I am not sure how many hams were aware that everything that CORA stood for was about to fold this past summer. Ham Holiday was not going to happen due to poor planing and the *C&E* had no Editor. A very special group of hams stepped forward and within a months time were able to pull off what everyone else thought was impossible. We had a Ham Holiday as well as a new *C&E* Editor. In September CORA held elections and a new group of hams became officers. If anyone can bring CORA back to being what it was created to be, they can. They have the expertise needed to do the job, they believe in CORA and the dream that it was created for.

The constitution and policies of CORA have not changed, only the attempts to destroy it have. If you have any questions concerning CORA or the newsletter, please bring them to us. We believe that

there is a solution to any problem as long as a person is willing to listen, and that it does not go against CORA's policies and Constitution.

I sometimes feel like I am fighting this battle alone because almost everyone in CORA is sick of all this childish garbage. Am I so wrong to want to fight this? Everyone seems to want to quit and just walk away from this. I keep thinking of all of the hams who will be hurt and not understand why we walked out and those who look forward to the yearly Ham Holiday. I know that there are times when we need to say ENOUGH and turn away without looking back. I feel that if we do not fight this than are we being no better than those that started this? They want us to give up, why? I guess the real question should be, "Has CORA and the C&E outlived it's usefulness? Is CORA no longer serving the Ham Community and has Ham Holiday become a thing of the past?" Should a few obstructive misfits be allowed to destroy and fragment the amateur community here? Why is this being allow to go on?

WHICH EVER WAY THIS GOES, I PLAN TO GET MY CODE, UPGRADE AND LEAVE 2 METERS TO THE BRAT BRIGADE.

N1LPN

28 February 1995 CORA Meeting

I could not believe what I was witness to and feel that it would be best to attempt to express what happened into words. This is not the CORA minutes, just a moment in time and the effects are yet unknown.

The meeting began as always, hams greeting hams, club reps giving KB1ZQ last minute club news, and our officers getting everything ready to start. The meeting was called to order.....

The room became as silent as a tomb when John, NJ1V, stood and read his letter to all that were present. Silence remained as John read the last sentence. No one moved, spoke or even looked toward the person sitting next to them. To

say that everyone was in shock with disbelief is a complete understatement.

It was as if time itself had stopped. A moment frozen in time that could never be changed. The reality of the situation hung heavy in the air. Many were unaware of the magnitude of what we had been facing, no one understanding "why" this was even going on. The unspoken question was who will be next?

John is the second officer of CORA to resign in the past four months. He is not one to give up, and he has not given up on the ideas and dreams of CORA. Both officers resigned because they saw no other course of action open to them. Both stated that they left due to the on going problems involving certain individuals in the club MORI.

John is to me an example of what being a true ham is. He is always there to help anyone wishing to learn more about the hobby and Dxing. His wisdom, knowledge, and expertise will be truly missed by CORA. We just became a little "poorer".

It was not weakness but strength that gave John the courage to say he has had Enough and it is time for him to close this chapter in his life at this time

I pray that this whole mess will be resolved soon so we can get back onto track of planning for HH and producing the C&E each month. I am tired of defending policies that have been working for over 20 years just because a few want to do things their way. WHY?

Personal note to John : I will truly miss my monthly hugs from you. Hal says that will just give us an excuse to come visit you and Ruthie at home.(I like that idea!)

CHIT-CHAT

MEET EDITH VAUGHN, KA5YPX

In this month's C&E, you will discover a Word Search created by Edith Vaughn, KA5YPX, with a March theme. This is her second puzzle for the C&E.

Edith has been a Ham since 1986 and holds a full Technician license. Like many XYL's, she earned her ticket to be able to share the love of the airwaves with her husband, Lee, KA5WIS.

She soon discovered that there was so much more to being a part of the Ham Community than she dreamed possible. Over the years she has formed close friendships with those she has met through Ham Radio.

Edith coordinates the monthly Siren Tests for her club, E.A.R.S., and the Edmond Civil Defense. She puts forth many hours in lining up the hams needed to work the approximately 17 Sirens for the City of Edmond. She is net coordinator for the Siren Test Net which begins shortly before noon on the first Saturday of each month. She records each siren's performance and turns in the reports to the Civil Defense.

I have been told that she always has a ready smile and kind word for all. She is very active in her club and is always there to give a helping hand. She is also active in charity work.

Edith does do some Dxing now and then. Her hobbies include an assortment of crafts with a special love for ceramics. Most of her crafts are given as gifts to friends and family. She loves the challenges she enjoys from playing games and working on puzzles.

We are very lucky to have her share a few of her puzzles with us.

WB5SYT & N1LPN

Note : Do you know a ham that is very active in your club, that is always willing to help? It is the example that they set before us through their selfless dedication in the ham community that we wish to share with our readers.

The Editor



Edmond Amateur Radio Society Edmond, OK

Hello. What a busy pace we are maintaining ! The idle mind and the devil's workshop certainly does not apply to EARS. 1995 seems to be moving quickly as we are already into the third month of the year and just as busy as little bees. Stroll along with me as we go on a birds eye view of our clubs activities.

Club Station:

Dee, WD5FHR, has been successful in a bountiful way in setting up our club station. The City of Edmond has graciously made available space for our activities. We have two joined rooms which can be used for meeting and radio operations purposes. We are in the downtown Edmond Community Center and up on the second floor. Dee and Lee are working diligently to furnish our space with computers, radio equipment, furniture, and maps. The on-the-roof antenna planning is well underway with some exciting visions of us "working-the-world". As progress continues at a rapid pace, we will attempt to keep ya informed.

Board Meeting:

Our Board meeting for February was held on the 8th at the Edmond EOC. We had several club members present which sure made for a healthy size meeting. Board members present included:

Ken Stepp, N5DBM
Richard Winnard, KJ5QU
Sue Snyder, N5VWI
Mike Mize, KB5BIX
Dee Mize, WD5FHR
John Thomason, WB5SYT

Club members at the Board meeting were, Irene Long, Terry Tiller, Ed Granger, Clarence Dollmeyer, Bill Demand and Bill Thompson. Items discussed were:

Repeater Report, Treasurers Report, Financial Review Committee, Membership Renewals, Club Station, Emergency Coordinator Report, NASA Flight, ARRL Affiliation, Dinner Meetings, March Board Meeting, and New Business.

Dinner Meeting:

The February dinner meeting was held at Pepe's on the 16th with about 45 club members and families present. Door prizes, tacos, queso and a fair amount of frivolity were in abundance. Some of us attempted, without success, to get Dee to sing us some Spanish songs. He agreed, but would not go solo -so needless to say there was no vocal music at Pepe's from the EARS side of the border. Thanks to all who joined us.

Shuttle Mission:

Bill. (K5SKA), Clarence and Dee have put forth alot of work in preparation for an early March Shuttle communication schedule. Our club member and teacher at Bethany Middle School, Kathleen, KB5KIJ, has been selected as one of the few schools worldwide to communicate, via amateur radio, with the March shuttle. By the time you read this article, the Shuttle exercise will have concluded. We will have our fingers crossed for success.

Licensing Class:

Several class members have passed licensing exams with more to come shortly. Jim and Buford have passed entry level exams and are working to upgrade. Speaking of upgrading, Toni, KK5LH, is thinking in Advanced ways now. Was that fast getting her ticket ! Frank, AA5GI, keep us informed as to your class'progress.

Santa Fe High School:

On 13 February the Edmond Area Chamber of Commerce had a get-together with Edmond Public School staff with bunches and bunches of people and cars. It was necessary for EARS to assist in vehicular and pedestrian routing and management. That cold-cold North wind came a whippin down the parking lot and onto various frost bitten faces. Most were a smilin' but just a few were frownin'. Pat and Kevin headed up the event for EARS,

which resulted in our club getting nice publicity in the Edmond Evening Sun.

Looking Ahead:

March 8th @ 7:00pmn Board Meeting-Wednesday Club Station, Edmond Community Center

March 18th- St. Patrick's Day Parade, Saturday

March 19th- Club Meeting 2:00 pm, Sunday St. John the Baptist Catholic Church

April 1st, Siren Test 12 Noon, Saturday
Each Saturday, around 8:30 am Coffee and Breakfast at Gambill's Country Kitchen 2826 East 2nd, Edmond

Each Monday, 8:00 pm, Information Net

73,

John, WB5SYT de EARS

Great News For Clubs

Right now, at this very minute, two special elected officials of this state are attempting to bring into law "Senate Bill 113" Senator Shurden and House Representative Leist are the bill's backers.

This bill is to change the current rates that the local phone carriers are able to charge for the phone lines used in our repeaters systems. All repeater phone lines are classified as Businesses and are billed as such. SB 113 is to change that classification from Business to Residential.

What this would mean to the individual radio clubs that have repeaters tied to phone lines is approximately a two thirds savings over what they are now paying.

The Senate passed this bill with a 41 to 5 in favor and it should go to the House within the next 2 to 3 weeks. Our own John Thomason, WB5SYT is one of the major forces behind this bill.

If you support this bill, please let your State Senators and Representatives know. Any questions please contact John, WB5SYT at 340-1798. Be sure to state Senate Bill 113 in all of your correspondence. Many states have already passed similar bills.



A. R. R. L. Bulletins

From ARRL Headquarters
Newington CT

Provided By Mac, K2GKK and Judy,
KA5BJS

Special Bulletin 8
January 30, 1995

Apply for Scholarships

The Foundation for Amateur Radio will administer 56 scholarships for the 1995-96 academic year, to assist licensed amateurs who are students. The awards, from 500 to 2000 dollars, are available to full-time college students, including those who have been accepted for 1995.

FAR, composed of more than 75 Washington, DC, area amateur radio clubs, fully funds five scholarships with the income from grants and its annual hamfest in Gaithersburg, Maryland. The remaining 51 scholarships are administered by the foundation without cost to the various donors.

For more information or application forms, contact FAR Scholarships, 6903 Rhode Island Ave., College Park, MD 20740, before April 30.

Special Bulletin 11
February 2, 1995

Morse Champ Dies

Harry A. Turner, W9YZE, died December 21, 1994, in Alton, Illinois. He was 88 years old.

While in the service in 1941, OM Turner was clocked at 35 wpm using a hand telegraph key, said William J. Garrett, KB8NTE, of the Morse Telegraph Club, a record still standing and recorded in the current Guinness Book of Records.

According to a 73 Magazine article in 1976, Turner in 1964 applied to the Signal Corps for certification of his code speed record, which had been witnessed by General Ben Lear, and got it. Turner said he handled code under "business" conditions and learned to concentrate accordingly.

Among Turner's survivors are his wife, Edith.

ARRL Bulletin 11
February 1, 1995

"Vanity" Call Sign Order Released

The FCC today released its report and order in PR Docket 93-305, amending its rules to provide for a "vanity" call sign program. The new rules are effective March 24.

Each new amateur station licensed by the FCC is assigned a unique call sign through an automated process in accordance with the sequential call sign system. To accommodate requests for specific, "vanity" call signs, the Commission will use a series of four "starting gates." Gate One will allow a previous holder of a call sign to apply for that call sign or, where the holder is deceased, a close relative could apply, even if he or she is not otherwise eligible to hold the call sign. Gate Two will allow Amateur Extra Class licensees to apply. Gate Three will allow Advanced Class operators to apply, and Gate Four will open the system to any licensee, including a club station license trustee applying for the call sign of a deceased former holder.

The Commission will announce the opening of each gate by a Public Notice. The first gate will open as soon as the new application form, FCC Form 610-V, is available and the Commission's licensing facility is prepared to begin processing the applications.

The Commission said opening Gate One first to the small group of eligible licensees will allow for validation of their procedures and alert its staff to the need for adjustments. The following gates two through four will be opened sequentially "at such times as it is clear that the system

is ready to accommodate more applications."

Applications will go to the Commission's contractor, Mellon Bank, which will accept them in Pittsburgh, Pennsylvania. They will be processed "in the order they are received at the processor's work station."

Applicants will be permitted to request call signs reflecting their own or other call sign regions.

Except for a close relative applying for a deceased licensee's call sign, or a club station trustee applying with the written consent of a close relative of a deceased licensee, a vacated call sign will not be assignable for a two-year waiting period.

For clubs, persons not already holding a club station license, as trustee, must first apply for and receive a license before filing an application for a vanity call sign. FCC will begin accepting applications for new club and military recreation station licenses on the effective date, March 24.

The FCC set aside the one-by-one call sign block until the matter of assignment of these calls could be addressed in a separate proceeding. The ARRL had requested allowance for assignment of one-by-one call signs to special event stations of national significance.

A 70 dollar fee (7 dollar annual fee, for a ten-year license term) will have to be paid when requesting a new or renewed vanity call sign. The ARRL continues to work for legislation that will enable the Commission to charge a one-time fee.

Copies of the Report and Order are available from League Headquarters (SASE please). Details to follow in QST.

ARRL Bulletin 17
February 16, 1995

RFI Changes Proposed

The FCC has proposed to permit manufacturers and suppliers of computers and computer peripherals to market their equipment without having to apply for

equipment certification and await FCC approval, in ET Docket 95-19.

These devices now must be FCC-certified to ensure that they do not cause interference to radio services, including amateur. Certification requires that all measurement data and a detailed description of the product be submitted to the Commission's laboratory for review and approval.

The certification process can take 35 days or more, the FCC said, and eliminating the wait could save the computer industry some 250 million dollars a year, the industry has said. The FCC called the current regulations "particularly burdensome for small manufacturers" and said its proposed new authorization procedure would "align" FCC requirements for personal computers with those "used successfully in other parts of the world."

Under the proposed new procedure, FCC authorization would be replaced by a process based on a manufacturer's or supplier's Declaration of Conformity (DOC). The Commission also has proposed the adoption of permitting personal computer compliance to be based on tests and DOCs of individual components, without further testing of completed assemblies.

ARRL Bulletin 16

February 16, 1995

FCC-issued Call Sign Update

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

District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	AA0VS	KG0TJ	++	KB0QVG
1	AA1MB	KD1ZH	N1UFI	KB1BNN
2	AA2VU	KG2AP	++	KB2TLZ
3	AA3KC	KE3RA	N3UIZ	KB3BGK
4	AE4CX	KS4MX	++	KE4VDD
5	AC5AH	KK5JD	++	KC5MKA
6	AC6JX	KO6PF	++	KE6QOX
7	AB7HT	KJ7JB	++	KC7IQZ
8	AA8SA	KG8OO	++	KB8WQX
9	AA9NS	KG9AJ	N9ZZZ	KB9JCR
N. Mariana	KH0Q	++	KH0DQ	++
Guam	WH2K	AH2CZ	KH2NB	++
Midway	++	AH4AA	KH4AG	WH4AAH
Hawaii	++	AH6NU	++	WH6CSL
Amer. Samoa	AH8M	AH8AH	KH8CF	WH8ABB
Alaska	++	AL7PW	++	WL7CKG
Virgin	WP2Q	KP2CD	NP2HY	WP2AHV
Puerto Rico	++	KP4YM	++	WP4MWC

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

BBS Etiquette

From Archived Files of
WD6BPF, John Maclean

A BBS SysOp has what is generally referred to as a "thankless job." Here are a few thoughts on that subject. This file has been around since the early to mid 80's. While it was intended for land line BBS use, there is still a lot here that pertains to packet and other computer communications.

I don't think this info will ever "go out of style", at least I hope not! Note: I am NOT the author, Mel North!

COMPUTER ETIQUETTE

by Mel North

The following are a few points of general BBS etiquette. If you wish to maintain your welcome on whatever system you happen to call, it would be to your advantage to observe these few rules.

1. Don't habitually hang up on a system. Every SysOp is aware that accidental disconnections happen once in a while but we do tend to get annoyed with people who hang up every single time they call because they are either too lazy to terminate properly or they labor under the mistaken assumption that the 10 seconds they save online is going to significantly alter their phone bill. "Call Waiting" is not an acceptable excuse for long. If you have it and intend to use the line to call BBS systems, you should either have it disconnected or find some other way to circumvent it.

2. Don't do dumb things like leave yourself a message that says "Just testing to see if this thing works". Where do you think all those other messages came from if it didn't work? Also, don't leave whiney messages that say "Please leave me a message". If ever there was a person to ignore, it's the one who begs someone to leave him a message. If you want to get messages, start by reading the ones that are already online and getting involved in the conversations that exist.

3. Don't use the local equivalent of a chat command unless you really have some clear cut notion of what you want to say and why. Almost any SysOp is more than happy to answer questions or offer help concerning his system. Unfortunately, because about 85% of the people who call want to chat and about 99% of those people have absolutely nothing to say besides "How old are you?" or something equally irrelevant, fewer SysOps even bother answering their pagers every day.

4. When you are offered a place to leave comments when exiting a system, don't try to use this area to ask the SysOp questions. It is very rude to the other callers to expect the SysOp to carry on a half visible conversation with someone. If you have a question or statement to make and expect the SysOp to respond to it, it should always be made in the section where all the other messages are kept. This allows the SysOp to help many people with the same problem with the least amount of effort on his part.

5. Before you log on with your favorite pseudonym, make sure that handles are allowed. Most SysOps don't want people using handles on the system. There is not enough room for them, they get silly games of one-upmanship started, it is much nicer to deal with a person on a personal basis, and last but not least, everyone should be willing to take full responsibility for his actions or comments instead of slinging mud from behind a phony name.

Also when signing on, why not sign on just like you would introduce yourself in your own society? How many of you usually introduce yourselves as Joe W Smutz the 3rd or 4th?

6. Take the time to log on properly. There is no such place as RIV, HB, ANA or any of a thousand other abbreviations people use instead of their proper city. You may think that everyone knows what RIV is supposed to mean, but every BBS has people calling from all around the country and I assure you that someone from Podunk, Iowa has no idea what you're talking about.

7. Don't go out of your way to make rude observations like "Gee, this system is slow". Every BBS is a tradeoff of features. You can generally assume that if someone is running a particular brand of software, that he is either happy with it or he'll decide to find another system he likes better. It does nobody any good when you make comments about something that you perceive to be a flaw when it is running the way the SysOp wants it to. Constructive criticism is somewhat more welcome. If you have an alternative method that seems to make good sense then run it up the flagpole.

8. When leaving messages, stop and ask yourself whether it is necessary to make it private. Unless there is some particular reason that everyone shouldn't know what you're saying, don't make it private. We don't call them PUBLIC bulletin boards for nothing, folks. It's very irritating to other callers when there are huge blank spots in the messages that they can't read and it stifles interaction between callers.

9. If your favorite BBS has a time limit, observe it. If it doesn't, set a limit for yourself and abide by it instead. Don't tie up a systems time, money, and patience as a new user and run right to the other numbers list. There is probably very little that's more annoying to any SysOp than to have his board completely passed over by you on your way to another board.

10. Have the common courtesy to pay attention to what passes in front of your face. When a BBS displays your name and asks "Is this you?", don't say yes when you can see perfectly well that it is misspelled. Also, don't start asking questions about simple operation of a system until you have thoroughly read all of the instructions that are available to you. I assure you that it isn't any fun to answer a question for the thousandth time when the answer is prominently displayed in the system bulletins or instructions. Use some common sense when you ask your questions. The person who said "There's no such thing as a stupid question" obviously never operated a BBS.

11. Don't be personally abusive. It doesn't matter whether you like a SysOp or think

he's a jerk. The fact remains that he has a large investment in making his computer available, usually out of the goodness of his heart. If you don't like a SysOp or his system, just remember that you can change the channel any time you want. Besides, whether you are aware of it or not, if you make yourself enough of an annoyance to any SysOp, he can take the time to trace you down and make your life, or that of your parents, miserable.

12. Keep firmly in mind that you are a guest on any BBS you happen to call. Don't think of logging on as one of your basic human rights. Every person that has ever put a computer system online for the use of other people has spent a lot of time and money to do so. While he doesn't expect nonstop pats on the back, it seems reasonable that he should at least be able to expect fair treatment from his callers. This includes following any of the rules for system use he has laid out without grumping about it. Every SysOp has his own idea of how he wants his system to be run. It is really none of your business why he wants to run it the way he does. Your business is to either abide by what he says, or call some other BBS where you feel that you can obey the rules.

ALWAYS REMEMBER... YOU ARE A GUEST !

P.S. Remember, it doesn't take long to occasionally leave your local BBS SysOp a "Thank You" message for the time, effort and \$\$ that he or she has invested!

WD6BPF John Maclean
297 Glenwood
Ventura, CA 93003
805-642-1427 (1000-2200 PST)





VHF Club NEWS

W5LOW
Elmer Goekler Memorial
Station

Minutes of February Meeting

Meeting was called to order, at Neighbors (sic) restaurant by President Jackolyn, KA5ENU, at 12:00 p.m. with 11 members and guests present. Minutes were approved as published and Treasurer Ellard, W5KE's report was approved.

Ellard, W5KE, also gave the CORA report and there was a period of discussion about what the club's desires were regarding CORA.

Jackolyn expressed her intention to appoint Charlie, WA5JGU, and Bob, W5HXL, to plan a wiener roast later in the year. She confessed to leaving the "Turkey" at home and would accept it for another month. Meeting adjourned at 12:23 p.m.

Joe, K5JB, Sec'y

More on Complex Numbers

Last month, in the article on conjugate matching networks, I had to do some trimming to make my column fit. After rereading it I realized that some things that were omitted might have added some clarity to the article. I ran into Gene, K5DLE, at the Midwest City swap meet and told him that I was going to do an explanation of complex numbers in this month's C&E. He told me that most people's definition of complex numbers is anything over 2, heh!

What I glossed over was the conversion from rectangular to polar coordinates and back using a pocket calculator. This month I thought I would explain that part more thoroughly and draw a couple of figures to illustrate such things.

Figure 1, is a graphic representation of an impedance consisting of a resistance and a reactance. I am showing an inductive reactance X_L lying in the upward, or positive direction, which is the convention. Capacitive reactance, X_C would be a negative value on the chart. The Pythagorean

theorem is used to find the length of the hypotenuse of a right triangle when lengths of the two legs are known. In this case, the impedance, Z , is equal to the square root of the sums of the squares of the resistance and the reactance. $Z = \sqrt{R^2 + X^2}$ which is normally shown as:

X^2 is positive whether the reactance is in-

$$Z = \sqrt{R^2 + X^2}$$

ductive or capacitive because the square of a negative number is positive. Figure 1 uses rectangular coordinates. For illustration, I used the "3, 4, 5" right triangle. 3^2 is 9, 4^2 is 16. Add 9 and 16 and you get 25. Square root of 25 is 5.

Figure 2 shows the same information in

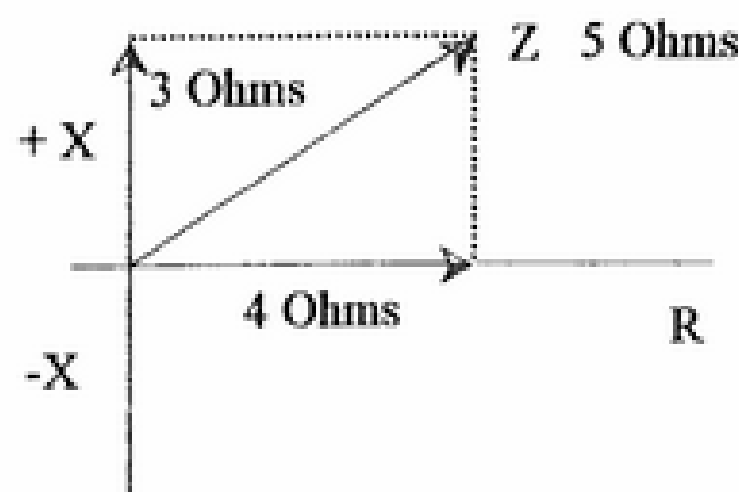


Figure 1. Rectangular Coordinates

polar coordinates. In this case, I am showing the impedance as a line, rotated counterclockwise from the right horizontal axis. This is somewhat of a convention. Inductive circuits, which have positive reactance values, cause the impedance line to rotate counterclockwise, while capacitive circuits, which have negative reactance, cause the line to rotate clockwise.

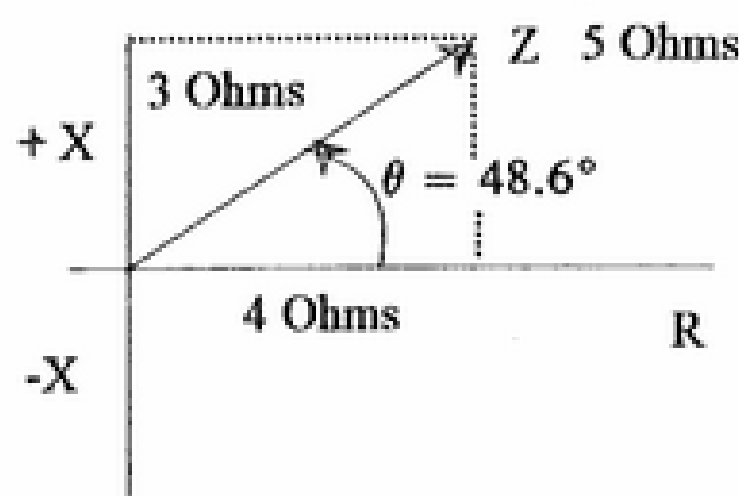


Figure 2. Polar Coordinates

The only difference in these two figures is the addition of the angle, θ , which in this case happens to be approximately 48.6 degrees. When we use rectangular coordinates, we express impedance in terms of its resistance and reactance components, using

a notation like, $R + j\omega X$, where ω represents the frequency and alerts us that this is not a simple number. In the case of the polar coordinates, we would represent the impedance with something like $Z \angle \theta$, where Z would be in Ohms, and θ would be in degrees or radians.

A complex number is one that has a real and an imaginary part. In this case, the reactive number is the imaginary part. In simple terms, you can't add complex numbers with the methods you used in the second grade. By using the pocket calculator conversion from rectangular to polar and back to rectangular I was able to avoid doing the complex number calculations.

When you have an impedance that is made up of the 4 Ohm resistor and the 3 Ohm reactor, you do have a magnitude of 5 Ohms of impedance but you can't necessarily add that number to any other impedance number and get a meaningful result.

Gene was almost right when he said a complex number was anything over 2. Actually it is anything more complicated than $2 + 2$.

Back to our conjugate match example. What makes the conversion from rectangular to polar coordinates useful is when you want to convert impedance (Z) into admittance (Y). Recall, that in a series circuit, all the voltage drops and gains equal zero. In a parallel circuit, all the current drops and gains equal zero. These simple facts are what make it desirable to use admittances when working with parallel circuits. When we converted the rectangular coordinates to polar coordinates, we were able to invert the impedance, Z , and get admittance, Y , without having to do the complex arithmetic. Once we had obtained Y in polar form, we quickly converted from polar back to rectangular to obtain the real part, conductance (G) on the x axis, and the imaginary part, susceptance (B), on the y axis. We could then combine this susceptance directly with any other shunt reactive components using our second grade arithmetic.

Pop open your ARRL Radio Amateur's Handbook if you want to see how to handle these situations with rectangular coordi-

nates, but if you want to do it the simple way, do the switcheroo to and from polar coordinates.

Joe, K5JB

Direction Finding Revisited

Our Circulation Manager, Linda, NILPN, passed along a request from Wyndell, WB5ISO, that I republish some of the direction finding stuff that I had published in the past. Most of the following is from the May 1993 column where I resurrected some stuff I had previously published.

Many times in the past I have written articles on radio direction finding (RDF). I didn't realize how many times until I reviewed the C&E indices that used to be kept on the Apple packet bulletin board (146.415 MHz). There were articles on DF technology, DF antennas, and even DF social consequences. Thanks to the efforts of Hank, WA5JRH, and others, there is some renewed local interest in RDF, such as with the "Fox Hunts". I thought some of you might be interested in some summaries of the tricks, technologies, and techniques that we have published before.

This month I will repeat the design of "Sid's Loop", the loop designed and made popular by Sid, W5KOZ, and cover some information on the currently popular "Double Ducky" designs. Maybe in later issues, I will cover some of the differences in the electronic direction finder designs. (That never happened.) Here are the reruns:

DF Types Reviewed

The most common types of DF methods use either directional antennas, or active DF instruments, or combinations of both. A transmitter hunter can go after a hidden transmitter with nothing but a radio receiver that will give some kind of indication of signal strength, even if it is "loudness" or "noisiness". But, he isn't going to find the hunting easy. To make hunting fun and easy, one must at least have *some* special purpose gear.

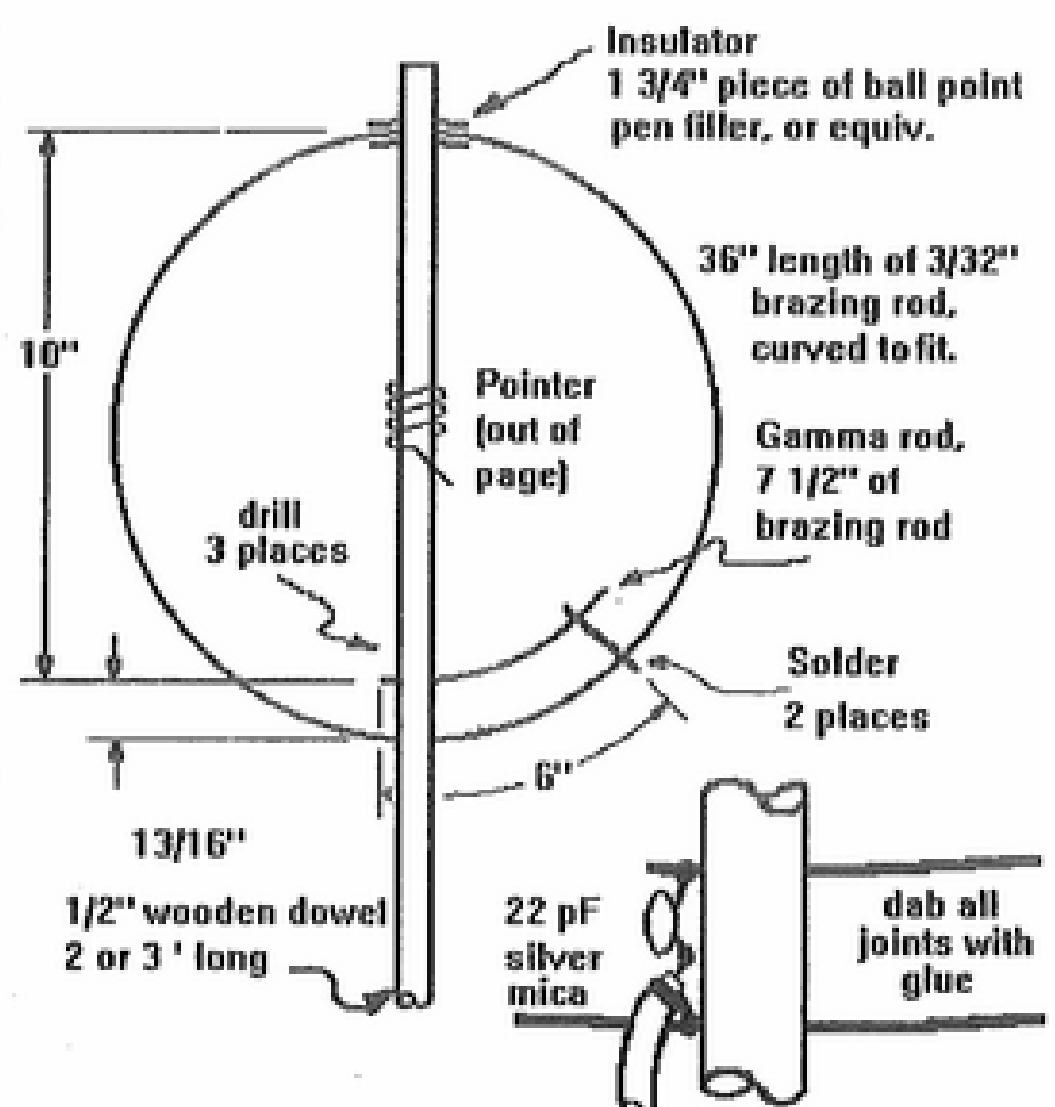
Yagis, Quads, etc., are popular directional antennas used in RDF hunts but they are bulky and hard to handle from a vehicle

while it is in motion. The dichotomy in radio direction finding, particularly with VHF, is that when you are stationary, and most able to handle precise measurements, multipath signals make it nearly impossible to determine azimuth to a transmitter. While you are in motion, the spurious multipath signals tend to cancel out leaving the true signal as the dominant one. But, while you are in motion it is hard to handle the instrumentation to make accurate measurements. In my experience with electronic direction finders, if I could keep the vehicle in motion, even if it was just at a creep, I could determine the direction to the transmitter. The electronic direction finder I used to use had a big meter I could read out of the corner of my eye to tell if I was "on course".

Hank, WA5JRH, said he experiences strong error signals from power lines, but I had never noticed that problem. I used to use the "Happy Flyers" design that provided a meter needle indication for which way to turn, and then gave an extremely accurate indication (within a degree) of azimuth when the needle was centered. The electronic direction finders are clearly superior, but they are relatively expensive, either in the time it takes to build one, or the money it takes to buy one. So, the following article describes one substitute for the electronic direction finder that doesn't cost much to put together. It is certainly better than groping with only walkie talkie signal strength as an indicator. Joe, K5JB

Sid's Loop

The antenna illustrated Figure 3 was extracted from the April 1980 (and earlier) C&E archives. Sid, W5KOZ, dreamed up the design and provided the details to me. It is not a "loop" in the classical sense of a loop antenna because it is almost a half wave electrically. It is a dipole curved into a loop shape. It is a tiny bit short physically to resonate at 2 meters, so the ends are overlapped a little and insulated from each other so they can form capacitor plates to bring the antenna into resonance.



W5KOZ
DF Antenna

Detail of coax connection.
Solder shield to center of loop. Solder cent. conductor to 22 pF S.M. cap.
Solder other leg of cap to gamma rod.

Figure 3. W5KOZ DF Loop Antenna for 2M

Explaining how it works is rather difficult because it doesn't have a single polarity. An incoming vertically polarized wave has most effect on the vertical portions of the loop. If the wave meets both sides of the loop at the same time, generated currents are out of phase at the center of the dipole and have no net influence on the antenna. Maximum signal pickup occurs when the antenna is oriented so that the incoming wave meets its edge. If the antenna feed was perfectly balanced with respect to the loop, this antenna would have a figure-8 pattern (bi-directional). But, there is something peculiar about Sid's design; it has a null broadside to one face of the antenna (almost a cardioid pattern). There is nothing to prevent current generated by the wave intercepting the antenna's feedline from contributing to the total antenna current. This unbalanced current acts to destroy the null that would naturally occur broadside to the antenna *but only on one direction*. Consequently, Sid's loop exhibits the single null.

The only design variation I have tried is to add a bit of a choke to the feedline about quarter wavelength below the feedpoint. I coiled the RG-58 into a three or four turn loop, about three inches in diameter, and tied it to the antenna handle. I couldn't tell

that it improved the performance, but it did make the antenna a little less susceptible to hand effect while being handled. Also, I used a transmitter and reflectometer to place the gamma matching short and adjust the overlap of the antenna's ends, but I don't know that it worked any better, except for transmitting.

Some of the old-timers still carry these things around in their car trunks to use if they get curious enough about where a signal is coming from. Try it. Joe, K5JB

An Active Circular Dipole

In the August 1981 C&E I described a couple of miniature "loop antennas" that I called "LCS"s, for "Little Circular Dipoles". One of them was made for an active DF design that was described in the July 1981 QST (and I presume reprinted in the current Handbook). This DF design is the popular "double ducky" one. Rather than use two rather low performance antennas, I adapted a small circular dipole to do the job. Figure 4 shows the general design. My reasoning was that since rubber ducky antennas are lousy performers, why use them for something as serious as DFing? At least, the small circular dipole was balanced and

resonant and all the antenna current could be accounted for, instead of assuming some of it was crawling down your arm, seeking that missing other half of the antenna.

In the case of this antenna, the broadside amplitude null of the design is actually undesirable because you want to hear the null in the tone from the receiver. I found by experimentation that if you tilt the antenna a little forward or backward the amplitude null is diminished and the tone null could be clearly distinguished.

The figure only shows the antenna and its enclosure. I chose the enclosure size to accommodate a 9V transistor radio battery and some miniature wiring for the switching circuit. A toggle switch on the side of the box controls battery power. Details of the electronics are in the QST article and the ARRL Handbook so I won't repeat them here. I made the enclosure by soldering pieces of circuit board together and soldering a BNC plug on the bottom. This connector is used to attach the assembly directly to the walkie talkie antenna socket. The center of the antenna is soldered to the top of the enclosure next to some Teflon insulated feed-throughs. The antenna feed stubs are soldered to the outer two insulated feed-throughs. The center feed-through has its outer half cut off and is only used as an attachment point for the switching diodes inside the box.

This antenna is difficult to tune because it is only a physical quarter wavelength (half the size it takes to be resonant). The antenna ends are sleeved with heat shrink Teflon tubing so they won't arc over during tuning with a transmitter. During tuning, neither of the switching diodes are installed. I individually adjusted each "gamma" matching stub and soldered it in place while a jumper was installed in place of its diode. I tuned each side using a low power transmitter and reflectometer. Once I completed tuning I used tie wraps to tie the overlapped antenna ends together. Dielectric strength is unimportant here.

Incidentally, Hank, WA5JRH, reports that the Ramsey Electronics kit for the "double ducky" DF system works real good. Joe, K5JB

Cardoid Antennas - (Not a Rerun)

I thought it might be good here to review the basic phase fed antenna array that produces a cardoid (heart shaped) pattern. The concept is simple, and at 2 meters a cardoid antenna can easily be made to be hand carried.

The cardoid pattern is characterized by a deep null in one direction and a very broad peak in the opposite direction. Usually, two antennas are installed a quarter wave from each other and fed so that one of them is one quarter wavelength out of phase with the other. This is done by introducing an extra electrical quarter wavelength of transmission line in the feed to one of the antennas. The null appears in the direction of the antenna that has the lagging signal. When a wave from the other antenna reaches it, it is sending a wave that is 180 degrees out of phase with the arriving wave so the two cancel out. Conversely, when a wave from the antenna with the lagging feedline reaches the other antenna, it is preparing to send a wave that is in phase with the arriving wave. The signal in its direction is thus 3 dB stronger than it would be if there was only a single antenna.

To make a simple cardoid antenna, build two dipoles with suitable feeds on a boom that will separate them by one quarter wavelength. The boom can be metal because it is not in the plane of the electric fields of the antennas. Make up two lengths of coax, one electrically a quarter wavelength longer than the other. Ideally you would want to do some impedance matching since you are dealing with two antennas, but in practice, for receiving it doesn't make much difference. Join these two feedlines so they can be connected to a receiver. Make some kind of mast, preferably non-metallic, to hold the whole thing up in the air. To use it, rotate it and listen for the null in a signal. The signal is coming from the direction the lagging antenna is facing. The null is usually quite noticeable, but since it is a null this kind of antenna is difficult to use on weak signals. Joe, K5JB

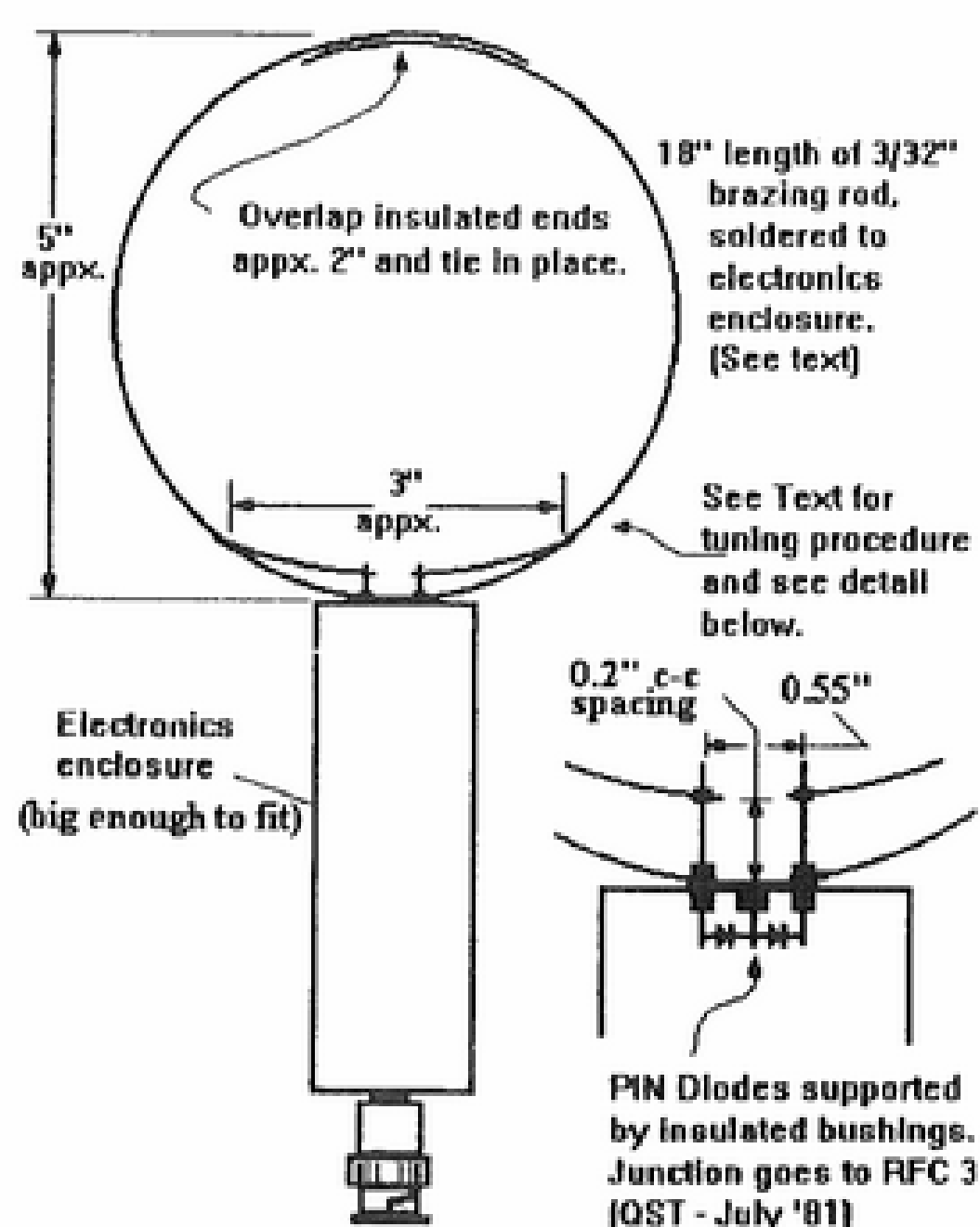
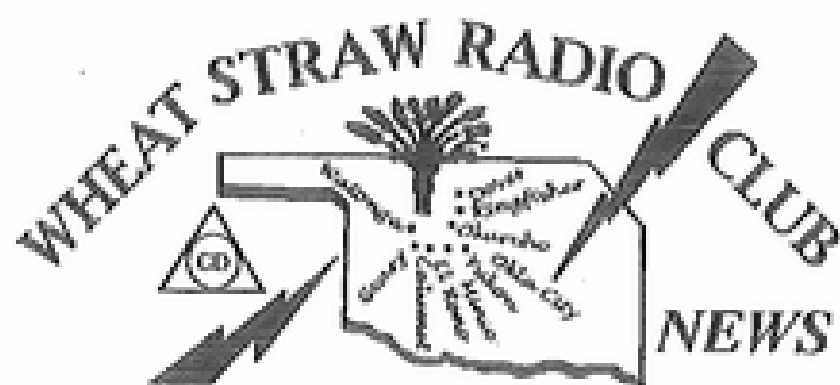


Figure 4. K5JB Active Circular Dipole



Wheatstraw Amateur Radio Club

Meeting was called to order by our president, Leo, WZ5H at 2:30 p.m. The meeting was held in the community building in Canton February 12. There were thirty visitors and members. Melissa Lanning, daughter of Rhonta, WB5TNF, and Arnold, KB5TND was there. We are happy to have Joel Bennett, KC5HHA, and his son Dustin, KC5JJG. They live in Taloga OK. Both of them joined the Wheatstraw club Sunday. Robert, N5MPH, also joined the club Sunday. We welcome the three hams; they will be an asset to the club. I wish all of them much enjoyment, with fun for years to come in the club.

The T-shirts or vest subject came up again. Tom, N5IKN, made a motion that everyone get a red vest with the Wheatstraw logo. The discussions started with no one seconding the motion due to the need for information.. Mary, KB5FOR, made a motion that we wait until the next meeting. More information is needed on the jackets, T-shirts, and vests, for decision. Then we will try and decide at the next meeting.

Tom, N5IKN, made a motion that the meeting be closed, seconded by Ray, AB5Z. Motion carried. Meeting adjourned for refreshments and then we had a program.

Tim Coffey, one of the Corps of Engineers at Canton lake, gave another good wildlife program, *The Eagles of North America*.

The bald eagle is known as the lord of the sky. There are only two species in North America, the bald, and the golden eagles. The bald eagle count is slowly increasing. The Corps of Engineers usually counts them in the month of January. This year they counted 24 eagles at the Canton lake area. The count was 50% adults. The others were still brown. The white head and tail comes at the age of five years old and older. The young start their first flights at

about 11 to 12 weeks old, but depend on their parents for several months after that.

There are about 60 species of eagles but the bald ones are the only ones exclusively living in North America. The female lays from one to three eggs before setting. Bald eagles have lived as long as 50 years in captivity.

The bald eagle is not bald at all. The word, "bald", comes from an old English word, "balde", which means, "white", referring to the white head and tail feathers.

June 20, 1782, the Continental Congress adopted the bald eagle as the central figure for the Great Seal of the United States. At that time the eagle nested throughout the country and was a common sight. Today the bald eagle is listed as threatened or endangered in the lower 48 states.

Things that threaten the eagle are such things as the use of long-lasting pesticides (such as DDT, which affects the eagle's reproductive capabilities), shooting, lead poisoning, and the conversion of the eagle's forest habitat to some other uses. Fortunately the use of harmful pesticides has been restricted in our country. Laws have been passed to protect the eagles from shooting, and extensive research is being done to find out more about the bald eagle.

When eagles are soaring in the sky looking for food they can see a small animal two miles away.

The early American Indians carved the eagle at the tops of their totem poles in great respect, considering the eagle the lord of the air.

The laws are very strict. If you find a dead eagle, do not take a feather or feet. If you get caught with any part of an eagle it carries a very heavy fine.

Ralph, WA5PFK

Next Meeting

The next meeting will be in Watonga, March 12, 1995. It will be held in the American Legion hall. The signs are not made yet but they may be by then. If the

signs are not up, the best way to find the hall is to start with the four way traffic light at the southwest corner of town, go north to west main street. West main is the street west of the City Pharmacy and Robison Equipment. Turn west between the two businesses, keep going west, and when you get to the end of the blacktop road keep going for about two blocks. The main road turns south on Taylor road. You just went around the front of the hall. Turn into the parking lot on the east side of the road and you are there. You can enter the small door on the south side of the building.

Ralph, WA5PFK

Gettin' Out of Town

Man to ticket agent: I want to buy a bus ticket for Norwald.

Ticket agent, searching book: Norwald? Let me find that. Hmm, never heard of it. Let me see... Norwald, I don't see Norwald listed, and I can't find it on the map. Just where is Norwald, anyway?

Man: Over there. He is my brother-in-law.

Who is the Smart Cookie

An antique collector was passing a small shop when he noticed a cat on the sidewalk out front, licking milk from a saucer. The man immediately realized the saucer was very old and valuable. He dtepped into the shop with an uninterested look and asked to buy the cat.

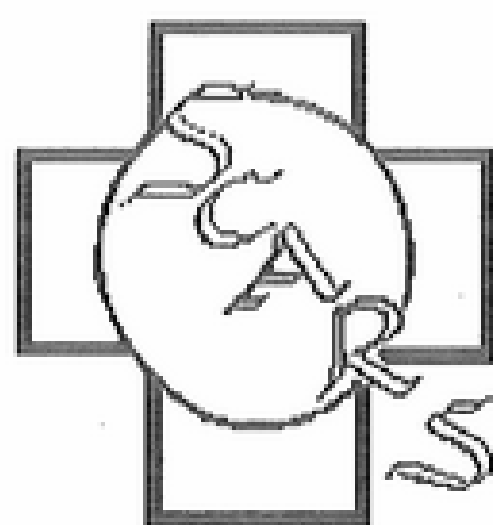
"I'm sorry," the shop owner said, "but the cat is not for sale." "Please," the collector urged, "I need a cat around my house to catch mice. I'll give you \$20.00".

"The cat is yours," the proprietor said, taking the money. "Listen," the collector added, "I wonder if you could throw in that old saucer as well. The cat seems to like it, and I'd hate to have him give it up."

"Sorry," the shop owner answered, "but that saucer brings me good luck. Why, just this week I've sold 68 cats!"

Lord fill my mouth with worthwhile stuff, and nudge me when I've said enough.

Ralph, WA5PFK



South Canadian Amateur Radio Society

The *South Canadian Amateur Radio Society* met for their monthly meeting on Feb. 10 at the Red Cross building on the north base in Norman. The meeting got underway at 9:34 a.m., despite the fact that one member locked his keys in his vehicle and another member threw his keys in the trash and still another member locked his keys in his vehicle with the lights on and the motor still running. Despite all of this and the bitter cold wind we still had a fast and short meeting inside with KJ5KB, Don, opening the meeting the usual way.

Treasury Report-

It seems KJ5KB, Don, ran out of words to say in a hurry so he turned the meeting over to N5UMH, Bill, who gave the treasury's report. Bill said *S.C.A.R.S.* had about 60 paid up members, with some members still paying their dues. Bill talked about a couple of things pertaining to *S.C.A.R.S.* members. One was that we have some left over tee shirts (medium) and a coat for sale and also all of the members that have computers and are interested in getting on Internet, talk to him and he can give you the necessary information about getting on Internet.

Radio Report-

N5BEW, Ken, wanted to explain the difference between the courtesy tones between the intown *receiver* and the main site *repeater*. The intown receiver is located on Memorial stadium and is on the minus side (-) of 147.060. Which would make it transmit at 146.460 and the main receiver, which is located at 72nd and Alamada is on the plus side (+) and transmits on 147.660. The difference between the tones will tell you if you are on the intown receiver or the main site

Collector and Emitter, March 1995

repeater. The intown receiver has a single beep and the main site receiver has a triple beep. Listen someday and you can tell the difference for sure. By the way the pl on the intown receiver is 141.3.

Ken, did say that if you are east of SE 24th and are using a hand held, use the minus (-) side and you should be OK, except for a few exceptions around town. It seems that Jerry, W5MCJ, is one of those exceptions that he has several areas around his house where he cannot transmit and get into the intown receiver.

Amateur Newsline Report-

KC5ILL gave a report on broadcasting Amateur Newsline and said everything seems to be going OK and asked everyone to listen in on it. Bill will broadcast the Newsline on Tuesday nights at 9 p.m.

KJ5KB, Don, asked the club for a show of hands for support and *S.C.A.R.S.* members gave Bill a 100% show of hands!

Class Reports-

Mark, N5HZR said the class was going real well. Mark said that he did not have a lot a people in the class, but things were progressing real well.

City of Moore Weather Class-

Gayland Kitch, KC5MMU, asked that if anyone was interested in attending a spotter school that the City of Moore will be holding one on March 2nd in the Moore Community Center. If interested give Gayland a call at 793-9079 and ask for more details.

Meeting adjourned-

The meeting adjourned around 10:15 with the the drawing of the door prize. It seems that Don, KI5TP won both prizes. Either he bought a roll of tickets or it was his lucky day.

-30-

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

15

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Word Search

by Edith Vaughn, KA5YPX

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E B I N P B K I A D F U I Q U A Q T P E
G M R O Y G H G R E E N B E E R U S G P
M A I I D D N M A R C H W I N D S A B M
V L S L L N F I Z S Y T B S H W B F L Y
X E H A K E A X T H X L K C L B N L M L
R K W E C R R L X T A C R R A B E E E B
S I H K I Y B D E R O A L C A N W B L H
N L I I R F H P N R M P D C N E N Z P I
O N S L T S K E M F I N S O A G Q N O R
I I K T A Y Y A O T A M C R X T S J E I
T E E U P S H S O F R O I K E E R E P S
A M Y O T S E I E O M N I R D H N F E H
C O O O S D V E T I G V E A G D T W E S
I C N G I O B S T G C F R D H Q B A W T
N E R E V D G Y R N C A N I L B U D E E
U T H H E N C E E J P R S O U H A U H W
M T M N I S E M L E P R E C H A U N T P
M R R R I N E G A U G N A L C I L E A G
O O P E F G K V X B B I R U H Y E T L K
C S G I J H S I R I C E M B L P A I F X
  
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BELFAST
BLARNEY STONE
COME IN LIKE LAMB
COMMUNICATIONS
CORNER BEF AND CABBAGE
DUBLIN
EI5CRC CORK RADIO CLUB
EI5CY TIM OCONNELL
GAELIC LANGUAGE
GO OUT LIKE A LION THE
GREEN BEER
IRELAND

IRISH JIGS
IRISH STEW
IRISH WHISKEY
LEPRECHAUN
MARCH WINDS
PARADES
SHAMROCK
SPRING STORMS
ST PATRICK
IDES OF MARCH
THE WEE PEOPLE
WEARING GREEN

WEATHER SPOTTING

CryptoQuote

by Forrest Rush, N5VWF

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

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

O. I. Zgryggzl

- | | |
|-----------------------|-----------------|
| 1. Ezvc | 4. Cgfyhryn Fyy |
| 2. Ozpi - Mzfy Ncqwpv | 5. Nyprz Pwwq |
| 3. Pwv Qyhewncu | 6. Adzn |
| 7. Kyfyzvy | |

Last Month's Answers: Old Radios - Atlas, Johnson, Drake, Hallicrafters, National, Collins, Hammerlund

THE RULES FOR GETTING ALONG WITH PEOPLE

1. Keep skid chains on your tongue. Always say less than you think. Cultivate a low, persuasive voice. How you say it often counts more than what you say.
2. Make promises sparingly and keep them faithfully, no matter what the cost.
3. Never let an opportunity pass to say a kind and encouraging word to or about someone. Praise good work, regardless of who did it.
4. Be interested in others; their pursuits, their work, their home and their families. Make merry with those who rejoice; with those who weep, mourn. Let everyone you meet, however humble, feel that you regard him as a person of importance.
5. Be cheerful. Don't burden or depress those around you by dwelling on your aches and pains and small disappointments. Remember, everyone is carrying some kind of burden.
6. Keep an open mind. Discuss but don't argue. It is a mark of a superior mind to be able to disagree without being disagreeable.
7. Let your virtues, if you have any, speak for themselves. Refuse to talk about the vices of others. Discourage gossip. It is a waste of valuable time and can be destructive and hurtful.
8. Take into consideration the feelings of others. Wit and humor at the expense of another is never worth the pain that may be inflicted.
9. Pay no attention to ill-natured remarks about you. Remember, the person who carries the message may not be the most accurate reporter in the world. Simply live so that nobody will believe him. Disordered nerves and bad digestion are a common cause of back-biting.
10. Don't be anxious about the credit due you. Do your best and be patient. Forget about yourself and let others "remember". Success is much sweeter that way.



Oklahoma City Autopatch Assn.

Minutes of OCAPA Meeting Monday,
February 20, 1995

The OCAPA meeting was held at the Marriot Hotel on Northwest Expressway and Independence. The meeting was the annual weather spotting training presented by Gary England. The program was very informative and interesting. Gary presented video of various types of storm cloud arrangements and spoke of their significance or insignificance. The KWTW weather team then fielded questions from the audience. The room was packed with people who represented many spotter groups including amateur radio, fire, police, civil defense and others. The event was a great success.

Respectfully Submitted by
Perry, KB5TOT

Personal Thoughts:

I have been thinking lately (I have had a little time recently since I have been vocationally displaced) of what each of us might do to better amateur radio and the lives of those around us.

I have come to the conclusion that becoming more involved on a personal basis and encouragement of others is the best medicine. I have been told that the Elmer system of learning the service (bet you expected the word hobby) has declined. Since I am a new ham, licensed since June 1992, I am not familiar with the Elmerism of amateur radio's past. I do know that I have had several people help me in the short time I have been a ham, I'll call them Gurus (goo-roohs)--I saw similar use of this term in a computer book for dummies.

I have not had one specific "Elmer" but have approached some knowledgeable hams, "gurus", in the area about specific problems and they have been willing to answer questions and help. There has been a recent influx of new hams to the service due to the No-code Tech license class, which may have overloaded the Elmer system. Also, many of us live some distance from each other, thus making it difficult to get together. Many of you have families and other organizations that you must share your time with and these at many times take precedence over amateur radio. I have found that help can be obtained from both new and old amateurs so don't just lean on the "old timers". Pick your gurus wisely, and don't wear out your welcome.

Do your research and come to them with a basic knowledge about the subject for which you are interested. I have only one more suggestion which was written a long time ago.... "Give and you shall receive". It works for amateur radio---since I have become involved as an officer in OCAPA and CORA, helped coordinate my club field day last year, and volunteered as a instructor/net control for the CW practice net that MORI had last year, among other things, I found people more willing to help me. I want to encourage those of you who are helping new and old amateurs to continue.

I want to thank those of you who have helped me--you know who you are and I won't mention your names so you won't get overwhelmed with calls after this hits the press.

Sincerely,
Perry, KB5TOT

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Power Line Interference Chapter II

By Jim Speck, KK5BX

The February issue of the Collector and Emitter detailed the line noise problem of Arley Garvin, WB5NKC, 3409 SW 20, Oklahoma City, OK. (405)681-0926. Arley handles traffic, working mostly on HF. He began having line noise interference problems in August, 1994. Using a step-by-step procedure reported in February, he has been able to get the attention of OG&E and receive some relief.

Here is the list of the steps he recommends to anyone having this kind of interference:

1. Write a certified letter (return receipt requested) to OG&E, detailing the frequencies you are trying to use which are being interfered with. For Arley, he used 740 kHz (Tulsa radio station KRMG), 7061 kHz, and 13.9+ MHz MARS. Write to the General Manager, OG&E, PO Box 321, Oklahoma City, OK 73101. Keep copies of this letter, and return receipts, to build a file to prove your case, for future reference. This is most important.

2. At the same time, send certified letters to the Oklahoma Corporation Commission, PO Box 52000-2000, Oklahoma City, OK 73152-2000, attn: Bill Burnett, and to the Federal Communications Commission, Field Operations Bureau, 9330 LBJ Freeway, Suite 1170, Dallas, TX 75243, attn: Jo Ann Davis, Program Support Specialist. Send copies of the letter you wrote OG&E.

3. Send another copy of the letter to the American Radio Relay League, 225 Main St., Newington, CT 06111-1494, attn: John C. Hennessey, Regulatory Information Specialist. Ask for any help he can give.



WSPAA - Aeronautical Center Club

The February ACARC meeting was called to order by Vice-president, Chuck Bryant, KB5ZVZ, at 7:30 PM. VP Chuck gave the Treasurer's report which was approved as read and reported. Election of Club Officers for the 1995 year were tabled until the March meeting.

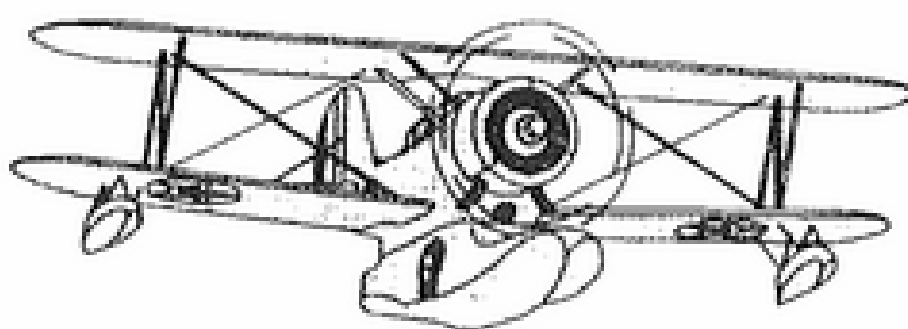
A special membership meeting for Aerospace America Special Events operation was called for 25 February at the club meeting room, 11 am. Issues to be discussed at this meeting are a club banner, location, antenna, equipment, etc.

Ham Holiday was discussed and the membership recommended to operate a Special Events station at Ham Holiday. Club members N5WNL, Glynn, N5VWF, Forest, and Ted, NY5W, offered to be ACARC reps to Ham Holiday and assist in the Special Events station operation.

VP Chuck reported that the Novice/Tech class would be graduating approximately 40 students in March with a VE Test session. Many thanks to Brad, KJ0W, for facilitating the classes.

Bring a friend or member to our next club meeting March 2nd or April 6th. The meeting was adjourned at 8:45 P.M. for the monthly coffee and donuts.

73 and Good DX, Dick, KJ5VV. V73SH, editor



CQ, CQ, CQ, DX:

February 28, 1995

KJ5VV will operate Portable VY1, Watson Lake, Yukon June 19 - 25, 1995 for ARRL Field Day. Watson Lake was

my choice due to my 1983 light plane trip to Canada, the Yukon, and Alaska. Watson Lake Airport was used as a stopping point for aircraft during the early 1930's and was formed as part of a chain of airports during W.W.II. American warplanes such as the P-39 Aircobra, the P-40 Warhawk and Douglas C-47 were being ferried from Great Falls, Montana to Alaska.

I plan to operate various nets to include the IPA Net, OMISS, Century Club and the YLSB System. Departure from the lower-48 is planned for mid-June to be in place at Watson Lake by 19 or 20 June through ARRL Field Day on 25 June. Thereafter, I will fly on to Anchorage and return to the lower-48 through BC. to be back in Oklahoma 4th of July. I plan to operate Portable KL7, VE7, and VE9 and will be Airmobile on 2m, 6m, and 440 MHz for those seeking grid squares while I am enroute.

Although there are those that would choose to fish or hunt in Canada, the Yukon, or Alaska, I am simply going to enjoy the "last frontier", pure air, clean water and NO bureaucracy for three weeks! And, oh by the way, I will be enjoying my hobbies of amateur radio and light airplanes.

73, and Good DX,

Dick, KJ5VV
10537 Peacock Circle
Midwest City, OK 73130

Do you Belong to A club that does not belong to CORA?

Central Oklahoma Radio Amateurs, Inc. is looking for help in putting on the annual Ham Holiday. We need your help in making this year's convention better than the past ones.

Help is needed in Technical Committees, help setting up and general assistance.

If interested contact one of the CORA officers listed inside the front cover

Come on out and Support Ham Holiday 95

Power Line (Con't)

4. In thirty days, if no relief has been received, send another set of letters to the above group. Also write Sen. Don Nichols, 1820 Liberty Tower, 100 N. Broadway, Oklahoma City, OK 73102, listing your complaints.

After Arley wrote Don Nichols, an FCC field agent based in Dallas showed up at Arley's home with equipment to survey the noise problem, and verified Arley's complaints. The FCC wrote a OG&E listing four locations where noise was found by the field agent. OG&E then replied by letter that they had repaired all poles within a mile of Arley's home. However, Arley noticed no difference in the interference at his home. In their letter, OG&E listed the frequencies it had used to find the problem spots, which were 6 and 2 meter frequencies. It is arguable that they did some good for any local users of these frequencies, but Arley was still hearing S9 noise on 75 meters and 40 meters.

Arley went mobile listening on 40 meters and found peaking noise on 7275 kHz at a pole just five blocks from his home. He notified OG&E, which sent a crew to the spot and found a leaky insulator which had been hit by lightning. They were able to find the spot because Arley had given them specific frequencies to use in the search. So to save time, be sure to list in your letters any such noise sources you notice. Arley says his noise is now down to S8 (from S9) on 75 meters, and he thinks there are many more noise sources to be found.

Randy York, KA5ZZX, living in far north Oklahoma City, has been plagued with power line noise on all HF frequencies at his home. Randy called OG&E and was called upon by a worker who had some fancy direction-finding equipment (which he didn't know how to use, according to Randy). Together, they were able to locate a transmission tower of very high voltage lines three miles north of Randy's home which they were able to triangulate as a source of noise. It has been over 30 days since, and nothing has happened to date on this problem. Randy is going to try the procedure listed above to see if he can get his problem handled.

A LOOK INTO OUR PAST

FEBRUARY 1976 COLLECTOR AND EMITTER

February cover had a huge Birthday Cake with a single candle. *The words, as I have been told, were those of Joe Harding, WA5ZNF(SK) the past few months, I have been asked what purpose does the C&E serve and who better to answer that question than Joe himself.*

WITH THE PASSING OF THE FIRST YEAR OF PUBLICATION OF THE CORA COLLECTOR AND EMITTER, WE WANT TO TAKE THIS OPPORTUNITY TO THANK YOU, THE OKLAHOMA CITY AREA AMATEURS FOR MAKING THIS NEWSLETTER FUN TO PRODUCE.

FOR A LONG TIME, THERE HAS BEEN SORELY NEEDED, SOMETHING TO CREATE COHESIVENESS BETWEEN AMATEURS IN THE AREA. CORA HAS EVOLVED TO FULFILL THAT NEED. BY POOLING OUR RESOURCES, WE CAN DEVELOP STRENGTH NECESSARY TO DO A FIRST CLASS JOB OF JUSTIFYING OUR SPACE IN THE RADIO SPECTRUM. THE CORA C&E IS THE SOUNDING BOARD FOR YOUR IDEAS AND COMMUNICATION MEDIUM FOR YOUR UNIFICATION. IT IS UP TO YOU TO USE IT, ENJOY IT, KEEP IT LIVELY, AND LOOK FORWARD TO MANY MORE HAPPY BIRTHDAYS!

JULY 1979 COLLECTOR AND EMITTER

In July 79, CORA had the dream of expanding it's membership to all the ham clubs in the state of Oklahoma. They were finishing up on the last details for Ham Holiday 79. Mark Nothcutt, WD5DYI, was the President of CORA. The following article was written by Mark to explain CORA and it's policies. These policies have remained the same throughout the years. The old C&E's were printed on half of a normal page without any columns. Today, that would be equal to each club having 1 full page with 3 columns. We just have not had some clubs using the space set aside for them yet it is there if they wish to use it. If a club or individual sends in an article we always try to publish it and if not will call and explain why, usually it is due to having no more space and promise to have it in the next issue..

A WORD ABOUT C.O.R.A.

Central Oklahoma Radio Amateurs, Inc. has been designed at its very conception to represent and promote amateur radio. Each affiliated club appoints representatives to a board of directors, thereby having equal voice and vote on our undertaking.

Our name is becoming a bit misleading. What originally started as affiliated clubs from the metropolitan Oklahoma City area has branched into a statewide organization. We now have affiliated clubs in Shawnee, Altus, and Ponca City, with more considering affiliation.

CORA's yearly project has been Ham Holiday. But alongside that planning and preparation, we publish this newsletter, *Collector and Emitter*. Also, we have been expanding our purpose with other projects for the year around.

If you are an active club member, consider the advantages of club affiliation with CORA. Our main advantage is our combined newsletter. Your club would have up to three pages in the *Collector and Emitter*, probably giving your club newsletter a lower cost per unit than your current system (or maybe your first newsletter of any kind). The C&E lets you know whats happening with other clubs, combines technical knowledge, provides for a wider span of interests, plus an interchange of ideas. Advertising is available for a select clientele, the Oklahoma Amateur.

Obviously, we would like to see CORA grow into a statewide organization with a larger scope, serving all points in Oklahoma. The future of the organization has many responsibilities. As a club member, bring CORA up for discussion at your meeting. We would like to have you be a part of us. Contact our editor for more details.

If you are not a club member, we hope you will consider a subscription to *Collector and Emitter*. You'll stay abreast of current activities of interest to Oklahoma hams, especially with our excellent technical articles written by our affiliate members.

In any case, CORA wants to extend an invitation to help us make the Oklahoma amateur fraternity a more closely knit group. Thank you for your interest, and I'll see you at HAM HOLIDAY!

Mark Northcutt, WD5DYI, President , CORA, Inc. July 1979

March 1 to April 1, 1995 Schedule of Events:

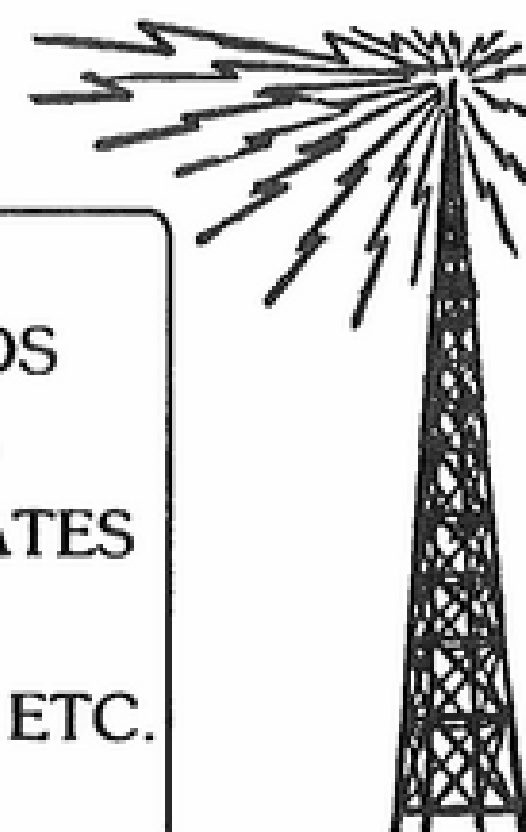
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 7:00p.m. Aeronautical Center 7:30 p.m. CARS	3	4
5 2:00 p.m. MORI VE Exams 2:15 p.m. Great Plains	6	7 7:00 p.m. MORI	8	9	10	11 9:30 a.m. SCARS 10:00 a.m. SCARS VE Exams
12 2:30 p.m. Wheatstraw	13	14	15 Ides of March	16	17 St. Patrick's Day	18 9:00 a.m. VE Exams (RSC) 11:00 a.m. VHF Club
19 2:00 p.m. EARS	20 6:00 p.m. CORA VE Exams Spring Begins!!	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	29	30	31	1



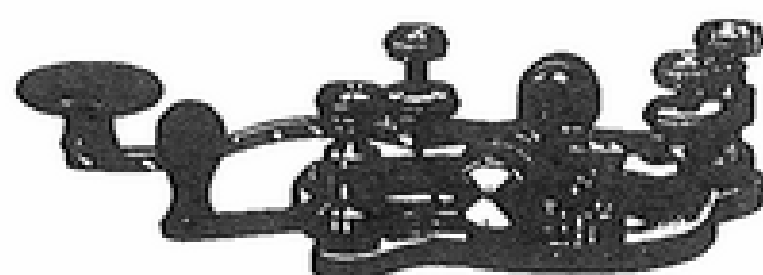
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Jim Kelly, WA5LKS



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