

SECOND CLASS MAIL

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50¢

ALTERNATE CURRENTS: A Dream Of Reaching

By S.A. Kelly (N5VSG)

Kilimanjaro is a snow covered mountain 19,710 feet high, and is said to be the highest mountain in Africa. Its western summit is called the Masai "Ngaje Ngai," the House of God. Close to the western summit there is the dried and frozen carcass of a leopard. No one has explained what the leopard was seeking at that altitude. --From "The Snows of Kilimanjaro" by Ernest Hemingway

Thinking about what it is--as hams--that we all have in common...I remember one time, I guess I must have been 13, maybe 14 years old, lounging around the house with my best friend Brian, wasting away another perfect summer afternoon wondering what to do. (Short authorial aside here: Why couldn't we have known then how valuable those moments really were? We might have tried harder to fill them with something instead of just sitting there--in our ignorance--listening to them tick away).

"Wouldn't it be something," I remember wondering out loud. "If we could launch something into space?"

I remember Brian giving me this funny look over the top of an X-men comic that he was reading. "You mean like a dog or something?"

Brian didn't like dogs, by the way. Or dogs didn't like Brian. I can't remember which.

"No not a dog. Just...something. Something that we had touched, going all the way into outer space. It would almost be like we were out there. Sorta. You know what I mean?"

Funny thing is, he did.

We never launched anything, of course. But I'll pass along to you what we figured out then: never never never allow two 14 year-olds to wander off anywhere with a book of matches, a Folger's Coffee can half-full of gas and one of those little red and white rockets that you fill halfway with water and then pump up with air.

It doesn't work.

It's a dream of reaching, I think. It's about possibilities. You can never grasp a possibility only because once you do, then it becomes a reality. You have to reach for possibilities.

Several summers later my family and I moved away from the apartment complex that Brian and I lived in. Not that far, really, just a mile or so across town into a house whose major distinction in my mind will always be the most ungodly-looking cactus garden in the front yard...egads! But I remember we took it as a major blow. We were the best swing-jumper-outers on the whole apartment playground for crying out loud. How could I just pick up and move away from that?

"Wouldn't it be something," I said, sitting next to my friend on an air-conditioning unit behind my apartment. "If we could rig up a deal from my house to your apartment were we could talk to each other any time we wanted? Man, that'd be so cool. Almost like I hadn't moved away. Sorta. You know what I mean?"

Funny thing is, he did.

"Yeah that would be cool," he replied. "You mean like walkie talkies or something?"

"Naw man. Those things don't go far enough. Remember that time we had some? We couldn't even talk from the ampster over to the swimming pool."

"Yeah you're right. Something besides the telephone though. Something different." (continued on back page.....)

1. AERONAUTICAL CENTER ARC Meets: First Thursday, Flight Standards Building, FAA, South MacArthur 7:30 pm. PR Jack Iman, WB5SVN S/T Brad Nelson, KJ0W AsVP Harold Todd, WA5VAQ 685-3685 Asvp Charlie Greene, WA5JGU 943-5631 Editor: Jack Iman, WB5SVN	11. EDMOND AR SOCIETY Meets: Odd Months, 3rd Sunday, 2:00 pm, Edmond EOC; Dinner, Even Months, 3rd Friday PR Ken Stepp, N5DBM 341-4874 VP Bob Long, N5KUE 373-2540 SE Lynce Hamlin, KB5FOH 427-2828 TR Ed Granger, KB5DZU 348-3454 Editor: Bob Long, N5KUE 373-2540
2. CENTRAL OKLAHOMA VHF Meets: 11:00 am, 3rd Sat., Golden Skillet, 3401 N. Classen Blvd, OKC PR Jack Muse, WB5ZKZ 691-1152 VP Fred Boardman, W5NL 427-2505 SE Joe Buswell, K5JB 732-0676 TR Ellard Foster, W5KE 789-6702 Editor: Joe Buswell, K5JB 732-0676	12. OKLA. PACKET RADIO ASSN. Meets: At Major Hamfests, Green Country, Ham Holiday, and Texhoma. PR Hank Blackstock, WA5JRH 722-0640 VP S/T Editor: Hank Blackstock, WA5JRH 722-0640
3. MID-OKLAHOMA REPEATER, INC. Meets: 1st Tuesday, 7:00 pm, Favorite's Cafe, 36th & S. Western, OKC PR Scott Walsh, N5NYS 787-3804 VP Larry Benedict, N5VYC 728-7824 SE Tim Hanna, N5USM 842-3812 TR Robert Moose, N5QKI 720-0073 Editor: Dean Ward, N0PAD 681-4606	14. CIMMARON ARS Meets: 7:30 pm, second Thurs., WX5Y Playhouse 827 S. 13, Fairview PR Terry McColl, N5MLT (405) 227-3672 VP John Medley, N5WVU (405) 227-3534 SE Dennis Painton, WK5V (405) 764-3599 TR Nadine Painton, N5FMH (405) 764-3599 Editor: John Medley, N5WVU (405) 227-3534
4. OK CITY AUTOPATCH Meets: 7:30 pm, third Tuesday, Salvation Army, N.W. 50th & Penn. PR John Guida, NJ1V 340-6518 VP Chuck Wilhite, K5NK 721-4926 SE John Brassfield, N5SAM 685-8070 TR Mike Begley, N5VIT 732-2827 Editor: Chuck Wilhite, K5NK 721-4926	15. SOUTH CANADIAN ARS Meets: 9:30 am, Second Saturday, Red Cross Bldg., North OU Campus, Norman PR Don Schader, K15TP 321-9649 VP Mike Winkel, N5SOF 366-8639 TR David Gates, N5LCL 392-5677 SE Gary Skaggs, WB5ULK 799-5363 Editor: Ken Brown, N5KUK & Gary Skaggs, WB5ULK
	16. EDMOND AR CLUB Meets: 7:00 pm, Second Monday, Various locations. PR Mark Northcutt, WD5DYI 755-4672 VP Wendell Cochran, WB5ISO 943-4308 S/T Kay Northcutt, WD5DYJ 755-4672 Trustee: Dennis Orcut, WB5ISN 340-0034
6. ALTUS ASSOCIATION Meets: 7:30 pm, Second Thursday, North Main Fire Station, (CD) Altus PR Jim Romines, K15YY VP None S/T Bob Heron, KE4BN Editor: Jim Romines, K15YY	18. GREAT PLAINS ARC Meets: 2:15 pm, First Sunday, Home of N5LRR, 2914 Osage Drive, Woodward PR Bob Bayles, WB0GAX, Woodward 254-3561 VP Andy Taylor, N5LRR, Woodward 256-4017 SE Rod Ford, WB5OVT, Gage 923-7683 TR Freida Patterson, N5EOX, Woodward 256-2111 Editor: Phillip Perry, N5QCN 938-2453
7. BICENTENNIAL (76'ERS) ARC Meets: 7:30 pm 2nd Tues., 1801 N. Lincoln Blvd., Parking in Rear PR Hank Stokes, K85XM VP Chad Drewery, N5QIQ TR SE Jack Conley, AA5VU Editor: Not Filled	
9. WHEATSTRAW ARC Meets: 2:30 pm 2nd Sunday, Location Varies, see Club Section for Details PR Ray Barnes, AB5Z, Longdale 274-3334 VP Neal Kappus, N5KCO 262-1551 S/T Joe Garland, WA5FLT, Calumet 893-2660 Editor: Ralph Wilder, WA5PFK, Watonga 623-5421	CENTRAL OKLA RADIO AMATEURS Meets: 7:30 pm, Fourth Tuesday, Salvation Army, Penn & NW Highway, OKC, (Back Door) PR Frank Tassone, AA5GI 341-1124 VP Kathy DeGraffenreid, AA5RU SE Jim Buswell, N5BEQ TR Tom Mangham, K5LDI 677-5291 Editor: Scott Walsh, N5NYS 787-3804 Circulation/Advertising: Terry Tiller, KB5RQT 373-4141
10. Oklahoma DX Association Meets: Quarterly - Hamfests, DX Net Saturdays - 1600UTC-7.195MHZ, Box 88, Wellston, 74881 PR George W. Adkins, AD1S VP Darrell Reed, KF5DA SE Paul Harrop, WB5NDN TR Paul Wardell, N5PYD	

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Scott Walsh, N5NYS, Editor
Terry Tiller, KB5RQT, Circulation/Editor
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Joe Harding, WA5ZNF, Editor Emeritus

CORA —

Frank Tassone, AA5GI, President
Kathy DeGraffenreid, AA5RU, VP
Jim Buswell, N5BEQ, Secretary
Tom Mangham, K5LDI, Treasurer

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 official. We can't do a thing about it if you don't. Below is a sample label:

4 92/01 2
Wilson, Mike WA5RTY
1234W 49
McCloud OK 74861

The "4" means Autopatch Club. "92/01" means he is overdue. The "2" is for postal rates.

Dear Secretary/Treasurer,

When you want a change of any to your membership, you must fill out completely a subscription slip. Watch for the date you recieved their money 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.

Story information, as well as letters to the editor should be sent to Scott Walsh, 600 Annawood Dr, Yukon, OK, 73099-2008 or left in their entirety on the QST BBS at (405) 354-3241. You can also leave your article in N5PHW's packet mailbox on 145.03.

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Howdy! This is NJ1V. I guess by now many of you have heard that, by virtue of my latest encounter with Mother Nature, I have several new nicknames and phonetics - "Sparky", "Never Just One Volt", etc. We took a massive direct lightning strike early on April 14, hitting the 100 foot tower and power lines, causing a lot of damage! By a Stroke of luck, we avoided a real disaster, as I guess a house fire could have easily been the result based on the extent of the damage.

Anyway, I'm back to replacing and rebuilding! Forrest - keep your hamburger flipper handy!

I recently overheard a discussion on 32, where several of our members were bemoaning the apparent increasing lack of customer service and good will in our society. I too agree that this is a big problem, since it also affects me professionally. I am involved in the retail industry, and customer service and good will are often the only things that separate success from failure.

Just think about your own perception. What if you visit a local retailer, get a lot of attention in finding your purchases, like the prices, and then wait 20 minutes in the check out line, only to be made to feel unwelcome by a rude and grumpy cashier! What impression do you leave with? Are you going back? Probably not, if you have an alternative! And what are you going to tell your family and friends about your experience? Not anything good, I'll bet! And can blame you?

UT - you know what? Some of us

are guilty of the same lack of "customer service and good will" with respect to the way we sometimes treat guests and visitors on our repeaters, and often to our own fellow members. All you have to do is listen carefully for a few days, and I'm sure you will come to the same conclusion.

I take a lot of pride in being a member of OCAPA, and part of the greatest hobby going - Ham Radio! I have experienced, first hand, the fellowship, help, and support of a terrific bunch of folks who, for the most part, work together for the benefit of each other and the organization, and are a credit to Amateur Radio. Let's not ruin that by conducting ourselves such that we leave others with the same unwanted feeling as caused by the rude and grumpy cashier.

CUL es 73....."victor"

I understand that President John has written a good article for the C&E this month, so mine will be on the short side.

Of primary importance to the club at this time is the annual Field Day. Larry, KF5JN, has once again taken on the responsibilities of chairing the responsibilities for this event and as usual has already started making preparations in advance. Larry has asked for some assistance in obtaining antennas, towers, and of course radio equipment. Field Day will once again be held at the usual site on K5JL's farm on the outskirts of Piedmont. If anyone can assist Larry in any way, he would certainly appreciate the help. Field Day is always an exciting weekend, so start making plans now to assist and attend.

Barron still has several caps which he would like to dispose of and collect the funds from those who ordered

them. He has the following caps: N5PHW, K5PER, AB5GD, N5ZHM, KB5TTG, KB5BOB, WD5CSM, KB5TCW, N5KLN, and N5PML. These folks should contact Barron as soon as possible.

I would like to commend the editor of the C&E for his good work. I am sure with all the new programs and equipment he has purchased, he will continue to improve the quality of our publication.

Not to bring up sour grapes, but the C&E is a family oriented magazine. I personally feel that since wives, girlfriends and children read the articles, that foul language should not be used in the text. Granted these are words used in every day life at work, school and possibly homes, but it is still offensive to some and I see no difference in it and other things which have caused an uproar in the past.

Watch for an upcoming "I HEARD".
K5NK

MINUTES OF THE OCAPA MEETING April 1993

The meeting was called to order by John NJ1V at 7:30pm.

The minutes of the March meeting were read by John N5SAM, seconded and passed.

Treasurers report was read by Mike N5VIT reporting a balance of \$2,032.28, seconded and accepted.

TECHNICAL COMMITTEE

Hank WA5JRH reports the 444.30 machine audio is in need of some new chips. Replacement chips cost \$60 and an upgraded board cost \$160. MOTION to replace the chips for \$60. Seconded and approved. Mike N5VIT is in charge of the hardline installation on the tower. He needs people that can work comfortable at the 600 foot level and

higher. He said if you freeze up at that level, it is a long way to the ground.

FIELD DAY COMMITTEE

Larry KF5JN recommended that we compete in the 3A class again this year.

This involves a lot planning and equipment. The club has 2 towers, but will need at least 3 more, a 6 meter SSB rig, antennas and rotors. Some of the bonus points include a novice HF station, technician VHF/UHF station, packet station, satellite station, natural powered station, issuing a press release, relaying messages to the ARRL section manager, and passing traffic. Equipment sign-up sheets will be available at the May meeting.

EDUCATION COMMITTEE

Brad KJ0W thanked Baron WZ3F for explaining basic packet. Next month's session will cover satellite communications. At future sessions, contesting and DX chasing are topics.

EQUIPMENT COMMITTEE

Ed WA5YDF is in process of inventorying the club equipment trailer with a detailed report at the next meeting.

PROGRAMS/ACTIVITIES/CORA

Jim N5OHL told us that Ham Holiday is in the final planning stages and in need of programs. Contact Jim or anybody from CORA if you have questions.

NEW BUSINESS

Beginning this month, another raffle has begun. In the past, these have been great fund raisers. The grand prize to be a 2 meter mobile to be drawn at the August (officer elections) meeting. Interim prizes to be awarded monthly. This month Don Norton N5NZO won a repeater guide and Cheryl Brassfield KB5WQR won an ARRL Operating Manual. Forest N5VWF updated us on the condition of his father and ask for continued

prayers.

Meeting adjourned 8:50pm.

ATTENDANCE 54

John Brassfield, N5SAM
Secretary

From the Mailbag...

Dear Sir:

I read the February 1993 issue from cover-to-cover. I thought that I read the January issue also. Reading "On Frequency", I guess I missed something. I saw the female skier, but I didn't notice she was nude. I was more interested in the content rather than the front cover. Hell, I guess nobody thought that this was probably put out the front cover just to see if anyone actually reads the "C&E". Based on the printed letters, someone's reading it! Now I have to go into my organized desktop filing system (stacks of magazines) and see what I missed. Good Job, It got their (but not mine) attention.

Dear Mr. Walsh:

I noticed an article in the April, 1993 issue of Collector and Emitter about Hank Stokes, KB5XM (Page fourteen). The phone number given was 376-1076. I called that number and was told I had the wrong number. I failed to find him in the Oklahoma City phone book. Do you have a correct number for him? If so, please call me at 376-2362 and tell

me.

I have noticed that the C&E seldom lists a last name or a phone number of persons mentioned. I have had trouble tracking down persons in the past. A complete name and phone number would help. If there is room, give the address unless they do not want it published.

Sincerely,

Sorry about the phone number Bill. I also got a wrong number when I called 376-1067. I tried to find Hank's number but was unsuccessful. Maybe someone out there knows Hank or his correct phone number and would give us a call??? My number is 787-3804 if someone does know his phone number.

Printing the name and address of the author of a story is a great idea. Glad that you mentioned it. I'll see what the authors say and print them in the June issue. Tnx N5NYS.....

Tact: the ability to tell a man he's open minded when he has a hole in his head.





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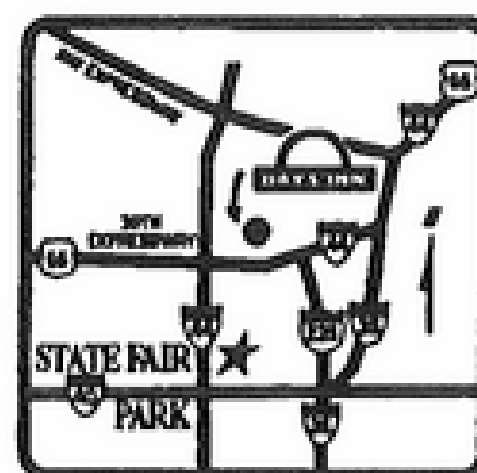
DON'T FORGET
"AN ALL-
YA-CAN-EAT
OKLAHOMA
SATURDAY
EVENING"
DINNER!

VE EXAMS SATURDAY
OKDX, ORSI, & OPRA
MEETINGS
ARES/RACES
MARS & AMSAT
PACKET & COMPUTER
RF FOXHUNT
OKLAHOMA ORP
NATIONAL WEATHER
SERVICE
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		or 3 for \$5.00	\$ _____

TOTAL \$ _____

Must be postmarked by Tuesday, July 20, 1993.
Pre-Registration Ticket(s) will be mailed to you if received by Saturday, July 10, 1993.
Send Pre-Registration Form with check or money order to:

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CORA



The EARS dinner meeting was held on April 16 at Pepe's Mexican restaurant in Edmond. Somewhere in the neighborhood of forty people were there, having fun and enjoying the food and company. The fun lasted from six-thirty or so until eight, when those of us enjoyed the food just a little too much were finally able to stagger to the door and go home. I guess I never will learn when to say when. Still, I am looking forward to doing it all again in a couple of months, even if I do make a pig out of myself and feel miserable afterwards.

I heard some really fantastic news at the meeting, though. Gloria and Tommie Guinn and Lee and Edie Vaughn went to Nashville in April so that Gloria could tape a show that will air on The Nashville Network sometime in August. I talked to Gloria during the dinner meeting, and she gave me all the particulars, but not much of it made it through my enchilada-soaked brain, and I'm afraid I'm not doing justice to this exciting news, but it did sound very interesting, and I'm sure everyone is very proud of her. Sorry, Gloria; we'll have to make you stand up at the business meeting and give us all the details.

Was everyone as surprised and pleased as I was to see their copy of last month's C&E in their mailbox at last? I had about decided that I really had forgotten to pay my dues after all. This should not be a problem ever again, because Scott, N5NYS, just spent what sounds like a ridiculous amount of money on equipment designed to take all the work out of

this newsletter (darn). As you can probably tell, I take care of the simpler and more prosaic parts of putting the C&E together, such as misspellings and stapling and all of that unglamorous stuff. Keep up the good work, Scott. As long as you are electronics-happy and don't tease me too much about my ancient Commodore, we'll get along fine.

Field-day new flash...EARS and MORI and Channel 4 weather are joining forces to put together field day this year. Big plans are in the works, and I'll have more info as it becomes available. Stay tuned to this newsletter, and we'll keep you informed. I always wanted to say that.

In the past, EARS has maintained at least a fifty percent membership in ARRL, and kept its status as a special services club. This year we are lagging a little behind in our quota, and we do need for at least half of our club members to join ARRL, or we will lose this status. We need just over sixty members to join, and we need them to do it before May 15, which is literally around the corner. If you would like to join, please contact Ed Granger at 348-3454 or mail your dues to PO Box 48, Edmond, OK 73083. If you think you might be interested, but are unsure, call me or Mike at 373-4141. PS: just between you and me, Mike knows a lot more about this than I do, so he should probably be your first choice when you do call. Thanks.

I am going to step out on a limb right now, and tentatively suggest that the Sunday immediately following the CORA meeting be reserved to help put together the C&E. We need about ten people from any club to help collate and staple and address each month's issue so it can be mailed

by the first week of the month and hopefully reach everyone before the club meetings start. As I said, this is all still tentative, but the Edmond EOC has been suggested as a possible meeting place, barring any severe weather. Any and all help would definitely be appreciated. Call me at 373-4141 if you want to help.

Club Jackets. This has become something of a sore spot with me. About a year ago, when I first got my license, a certain Emergency Coordinator, who shall remain nameless, promised me an EARS jacket with my name and call sign on it. It didn't seem like such an extravagant promise to me, but here it is a year later, and I'm still schlepping around in HIS jacket. Instead of the boy named Sue, we have the girl named Mike, or KB5BIX, and this is not a very satisfactory arrangement. Not only are people very confused as to my name, but this certain EC takes the jacket away from me on occasion, leaving me jacketless, nameless and cold. You get the idea. Here is where you can help out, folks. This certain EC is collecting orders for EARS jackets, in order that he might have harmony in his house and his own jacket hanging on his side of the closet. These sharp looking jackets come in either blue or white, and have your own name and call sign embroidered on the front. So if you would like one, and would like to help this poor, deprived, cold VP out, please contact Mike Mize at 373-4141 as soon as possible.

Well, that's all the news I have for now, and I can't think of anything else to gripe about for the moment. The next board meeting is Wednesday, May 12 at 7pm at the Edmond EOC. The next club meeting will be Sunday, May 16 at 2pm at St. John's Catholic Church. Ya'll come on out.

Later! Terry, KB5RQ.

The South Canadian Amateur Radio Society

My thanks to Ken Brown, N5KUK, for the notes of the meeting. I was unavoidably detained at work.

The SCARS meeting was called to order at 0935 CDT, with W5UZD leaving at 0920. 22 members and guests were present including 4 people awaiting their license. There was \$1391.13 in the bank and it was reported that W5MCJ and W5MCN are in Norman hospital accepting no visitors. Get well quick, gentlemen. N5LCL is arranging flowers.

There was no old business.

Bill N5UMH asked about getting a lub table at Ham Holiday. Some discussion took place and a motion was made, seconded and voted on to get two tables for the club at H-H.

President David said that most of the discussion at the last CORA meeting was about H-H and things are shaping up about as last year. Two equipment manufacturers are expected to have booths.

Technical - The UHF receiver has been reinstalled at the repeater site and there is still an audio problem. The audio card will take some adjustment to clean up the noisy audio.

Some information was given regarding a recent Red Cross disaster response team meeting that was held in Norman and the Red Cross is looking for volunteers to help on disaster response teams. If you can help, contact a club officer or the Red Cross directly and they will tell you what to do.

A question was asked about the club roster. A updated one will be published when the database is updated.

Bill, UMH, asked when we need to start discussing field day. Ken BEW said in the past it has been about a week before field day occurs. Some discussion took place as to what would be needed and Prez David said he will have a sign up sheet at the next meeting for field day participation.

The meeting adjourned at 0955.

73 de WB5ULK

MORI

AA5HW	Charlie
WB5IMT	Dave
N5JGB	Charles
KB8LXR	Gerald
N5NVN	Betty
N5OHL	Jim
N5OXO	Julie
KB5RBX	Shannon
N5SAM	John
N8SCQ	Charle
WN5T	Ray
KB5UKV	Ed
N5VIT	Mike
N5VWG	Sue
KB5WQR	Cheryl
KB5YKZ	Kruse

WE KEEP GROWING AND GROWING AND...(WELL, you get the point)

We are now around the 190 member mark, and are still growing!!! That 200 member mark isnt very far away!

WOW, I CANT BELIEVE HOW FAR YOU CAN SEE UP HERE!!!!

On April 9, 1993 the 146.67 and

146.925 repeaters were moved to their new home at 1450 feet! Currently they are on a temporary antenna which will soon be replaced with another antenna with more gain. The transmitters are not yet at their new home but give us time! So far, mobile coverage on .925 has been as far as East of Bristow on I-44! We havnt had too many people venture out very far on the repeaters, so if you are going out of town soon, let us know how far out you can get into the repeaters...

.67 currently has a minor problem with what sounds like a buzz in the background whenever the receiver is active -- This is due to a faulty jumper on the tower which should be repaired next time our technical committee goes up the tower....

The 146.925 link with SW OK is very active....The link is turn on/off so that our local chit-chat does not tie up the Lawton and Anadarko repeaters. During severe weather, this link can be very beneficial in relaying traffic from Lawton and other parts of SW Okla.

STANDING ROOM ONLY!!!!

Our April meeting had about 35 folks present.....We still have enough room (barely) for everyone that wants to come.... Our next meeting will be on May 4th.

FIELD DAY!!!!!!

This year, Field day will be June 26-27 and I am pleased to announce that MORI and EARS will have a joint field day...We are still working on some of the details...Check the June C&E and we will have all the information for you...

THATS ALL FOR THIS MONTH....

LATER!!!

de Robert -- N5QKI



VHF Club
NEWS

W5LOW
The Elmer Gockler Memorial
Station

Minutes of April Meeting

Meeting was called to order by President, J, KB0QJ, at 12:07 P.M. with 12 members and guests present. Minutes were approved as published in The C&E. El-lard, W5KE, gave the Treasurer's report. He related that he had to visit the Bank of Oklahoma again to make sure they understood that our account was supposed to be free.

Charlie, WA5JGU, gave the CORA report, and relayed a question from Fred, W5NL, about where the group wanted to meet for lunch next month. The group decided to meet again at the Golden Skillet. Incidentally, Saturday was Fred's 77th birthday and he was somewhere hooting it up! *Happy, Birthday Fred!*

The meeting was adjourned at 12:27 P.M. and I showed my TAPR deviation meter to a couple of people who were interested. Most charitable comment was, "Well, hope it works better than it looks!" Joe, K5JB, Sec'y

Direction Finding Revisited

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.

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, here is a 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 1 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.

Explaining how it works is rather difficult because it doesn't have a single polarity. An incoming vertically polarized

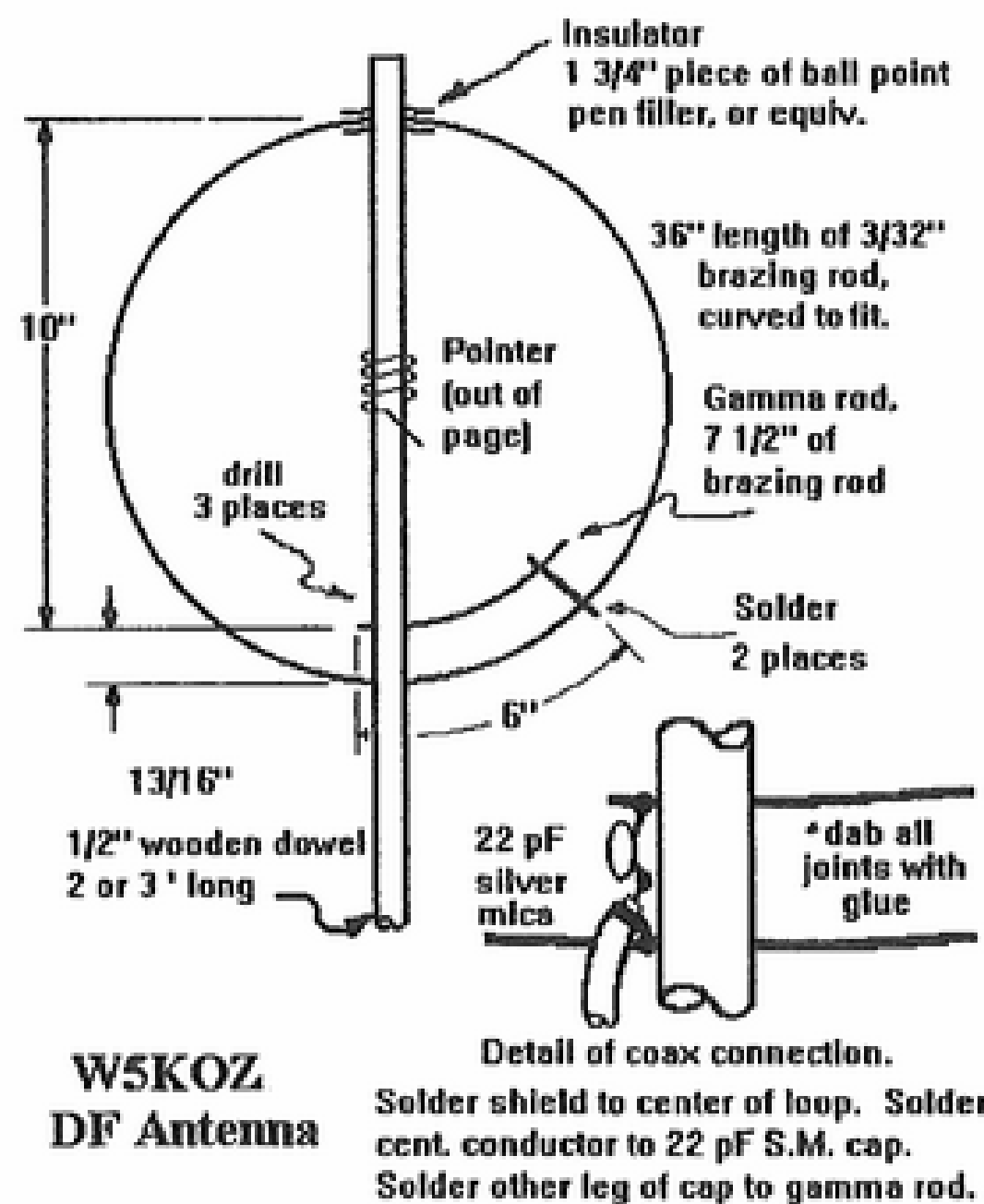


Figure 1. W5KOZ DF Loop Antenna for 2M

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 2 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 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

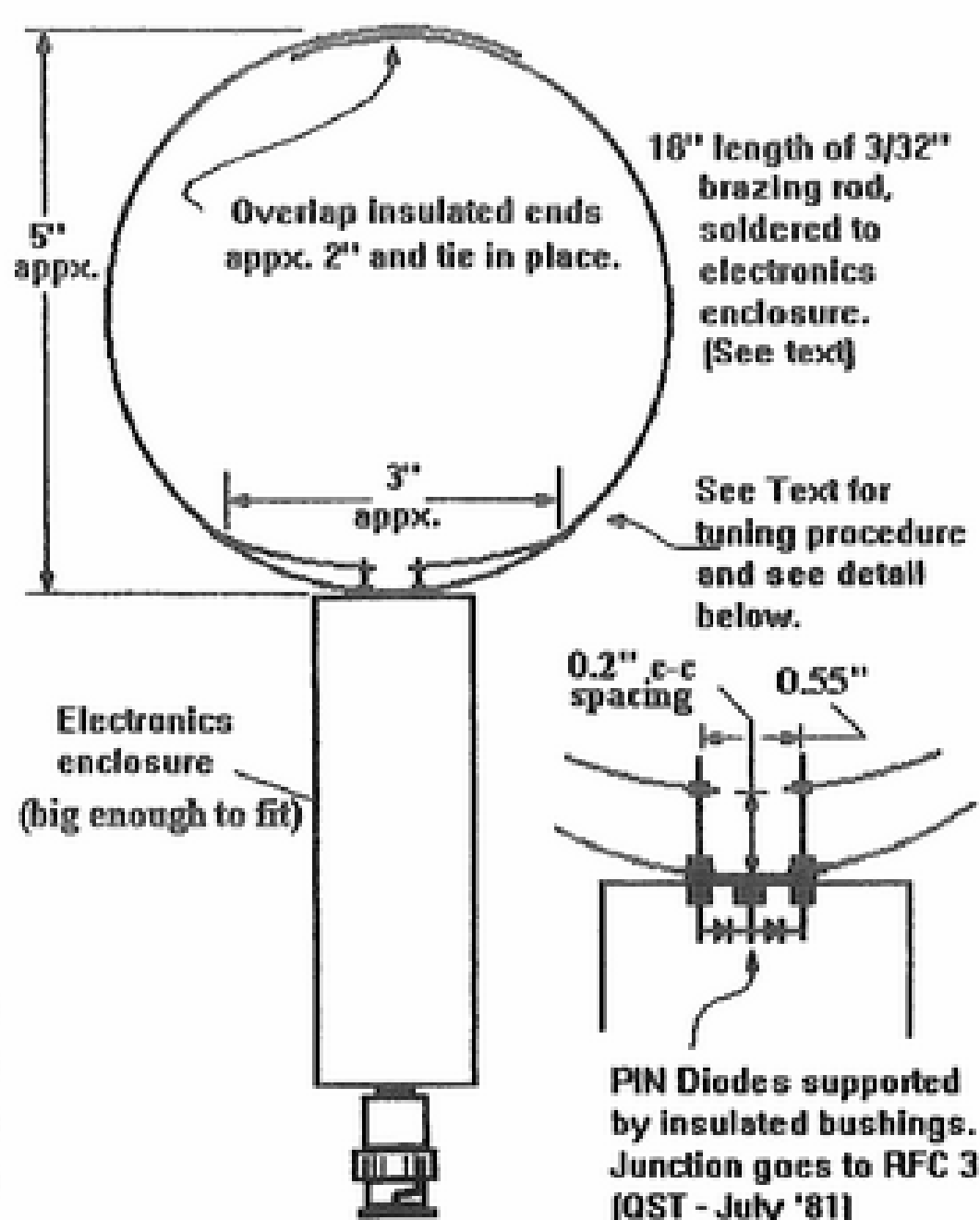


Figure 2. K5JB Active Circular Dipole

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 individually 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.

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

Looking Good, Scott!

I got the C&E today and had a chance to give it a quick scan before finishing this column. It looks like Managing Editor, Scott, N5NYS, put much work into the layout and appearance of this issue and it is really *Looking Good!*

I probably won't be much technical help with my limited resources (Wordstar on a KIM-1 with 512 bytes of memory) but I will do what I can to make the C&E a rag as good as it can be!
Joe, K5JB



Dear Jabby,

Dear Jabby Returns?

Not really. I had a yen to experiment with my ink splat printer and see if the little dots it made would make a suitable substitute for a halftone for the C&E. It is commonly believed that I am still using my Model 19 Teletype printer for my C&E columns. *Not true.* I only use that for formal correspondence, such as job applications, etc. For informal things like the C&E, I use a Hewlett Packard bubble sneezer connected to my KIM-1 that has been upgraded with the popular 256 byte memory expansion.

For you who may not have ever read a Dear Jabby column, it was used to give stupid (and sometimes sarcastic) answers to stupid questions, or to make fun of *intellectually challenged* people.

I will get plenty of opportunity this week to work on my sarcasm because I am off to Dayton! I have a bunch of really great friends who irreverently refer to themselves as the "International Order of Kra-zies", or IOOK. One of their slogans is, "I would have answered sooner, but I was asleep!"

Back to the picture. I don't know if you have ever looked closely at a picture in the newspaper, or looked at a newspaper, or even if you care, but I'll tell you anyway how those pictures are made. The photograph that is used to make a black and white picture is processed with a method that produces a "half tone" negative. In this negative, the darkness of the picture is used to create dots of various sizes. My bubble booger printer isn't this smart. All its dots are the same size. To make part of a gray scale picture darker than the rest, it just sneezes more dots on that part of the picture. My curiosity was piqued when I got the HP printer to see if it would do an acceptable job of printing a

black and white photo in the C&E. If it worked, I could avoid the cost of having a half tone print made, and avoid the process of delivering a half tone that has to be pasted to the galley for the photo typesetter.

There are some really sophisticated methods in these printers and the controlling computers for deciding where to put all those dots. For this first experiment I chose a method called *scatter* that attempts to scatter dots randomly enough to prevent making patterns in the final picture. Another method called *pattern* makes a picture that looks a little more crisp if you squint your eyes a little, but I hate to ask C&E readers to squint their eyes when they read my stuff. (...much less to ask them to keep their eyes open!)

In the past we have run a few pictures, and they certainly make the C&E more interesting and entertaining, but it is really a hassle. Maybe this way will work pretty good, (or at least acceptably)!

More on Deviates

OOPS, poor choice of words, I meant to say *deviation meters*, but then who would have read on?

Last month we had articles describing a couple of deviation meters that work for setting up transmitters used for packet radio. Steve, N5OWK, started it all with the notion that he could build a meter much cheaper than the one recently designed by Lyle Johnson, WA7GXD, and made available in kit form from Tucson Amateur Packet Radio (TAPR) for \$90.00. I went along with him and built one that was even simpler than Steve's and both of them worked fine once they were calibrated. Well, I am going to be seeing Lyle in Dayton, and wanted to hassle him a little bit but I didn't want to do it without the full knowledge of his design and ownership authority.

In early packet radio days, I got a bad reputation with the TAPR folks by publishing a shoot-out between the initial TAPR designed TNC-1 and an elegant

(but *functionally challenged*) PK1 manufactured by GLB. There were some points about the GLB that I liked (like digipeating) and when I met Lyle he really cooked me for knocking the TNC-1.

I built the TAPR Deviation Meter and it works fine, but not really any better than the analog meters Steve, N5OWK, and I described last month. The TAPR meter is digital and self calibrates every time the receiver is turned on. It does this by generating a signal that steps from 10 kHz below center frequency to 10 kHz above, and remembering the voltage values it measured. This self calibration is the major advantage of the design, and in fact, it is the only calibrated instrument of its kind around that can be used on our 9600 bps stuff. Hank, WA5JRH, has had some success using an Oscilloscope on his receiver so in due time I will compare results with him. After I am satisfied that the TAPR meter gives reasonable results on 9600, I can apply the calibration to the cheapo analog meter.

The advantage the analog meter has (other than low cost) is that off-the-air packets are difficult to read with the digital meter that dishes out a bunch of numbers. With some experience one can watch the needle jump around on the analog meter and get a good idea how hard someone is driving a transmitter.

The instructions with the TAPR meter say to put a TNC in calibrate mode and set the deviation on the higher of the two tones. It is difficult to use this method to check a transmitter that is being driven with a KISS TNC, and impossible to check one that is being driven by a PacComm DR-200 (ROSE switch) since it has no calibrate mode. Since the 9600 bps modems use randomizers, the deviation can be read directly without having to go to a "calibrate" mode.

I guess I would conclude by saying that the \$90 cost of the TAPR meter, and accompanying receiver (about \$100 for the Radio Shack PRO-59) put this toy in the "limited appeal" category.

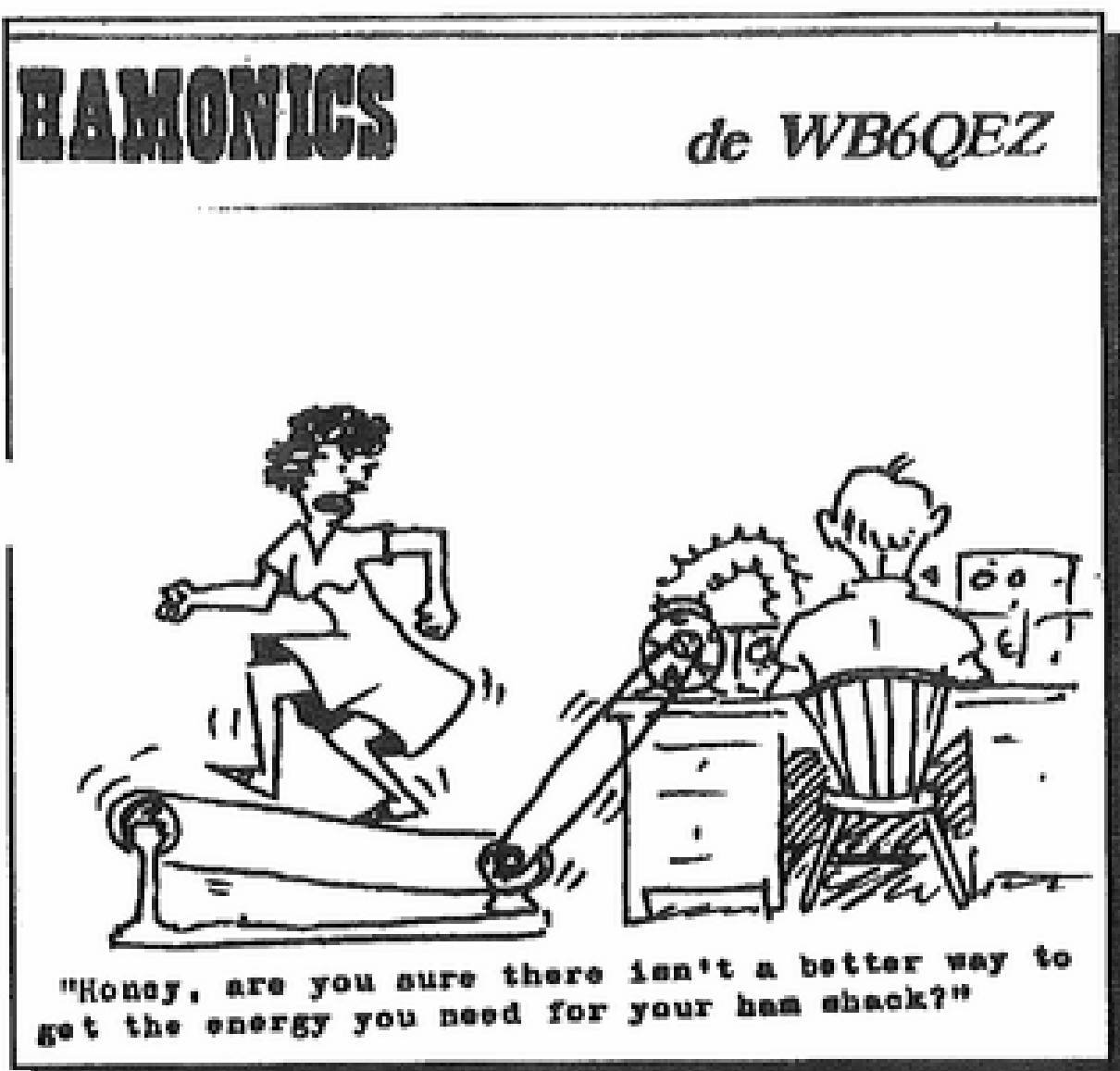
Joe, K5JB

AMATEUR RADIO NEWS...

William C. Wells of Logansport, In., has ad his Petition for rulemakeing denied and dismissed by the FCC. Wells' call is WA8HSU.

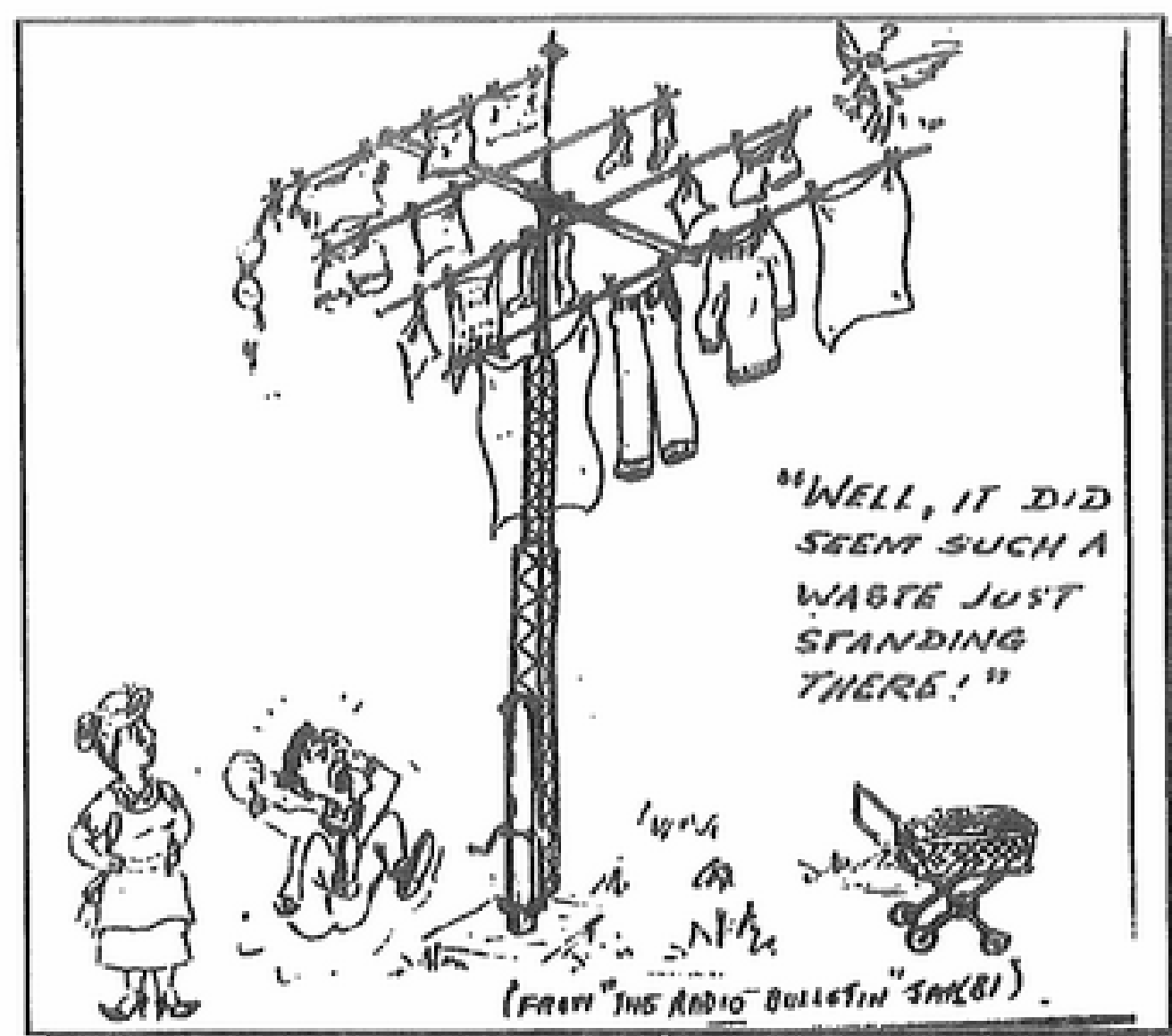
Wells wanted the commision to reduce the number of amateur license classes from 5 to 3. Wells wanted only the Novice, Technician, and General licenses to remain. Those that already have Advanced or Extra Class licenses could only use the General class privalgas.

TACT: The ability to tell a man he's open-minded when he has a whole in his head...



The Circle Ten council of the Boy Scouts of America has agreed to permit MetroCel (a division of McCaw Cellular) to construct a building and antenna tower at Camp Wisdom, Dallas, TX. The building and tower be shared with K2BSA, the amaterur radio station of the BSA. This facility will more than double the building space and provide a taller tower structure than is presently used. Construction has already begun and should be complete by May.

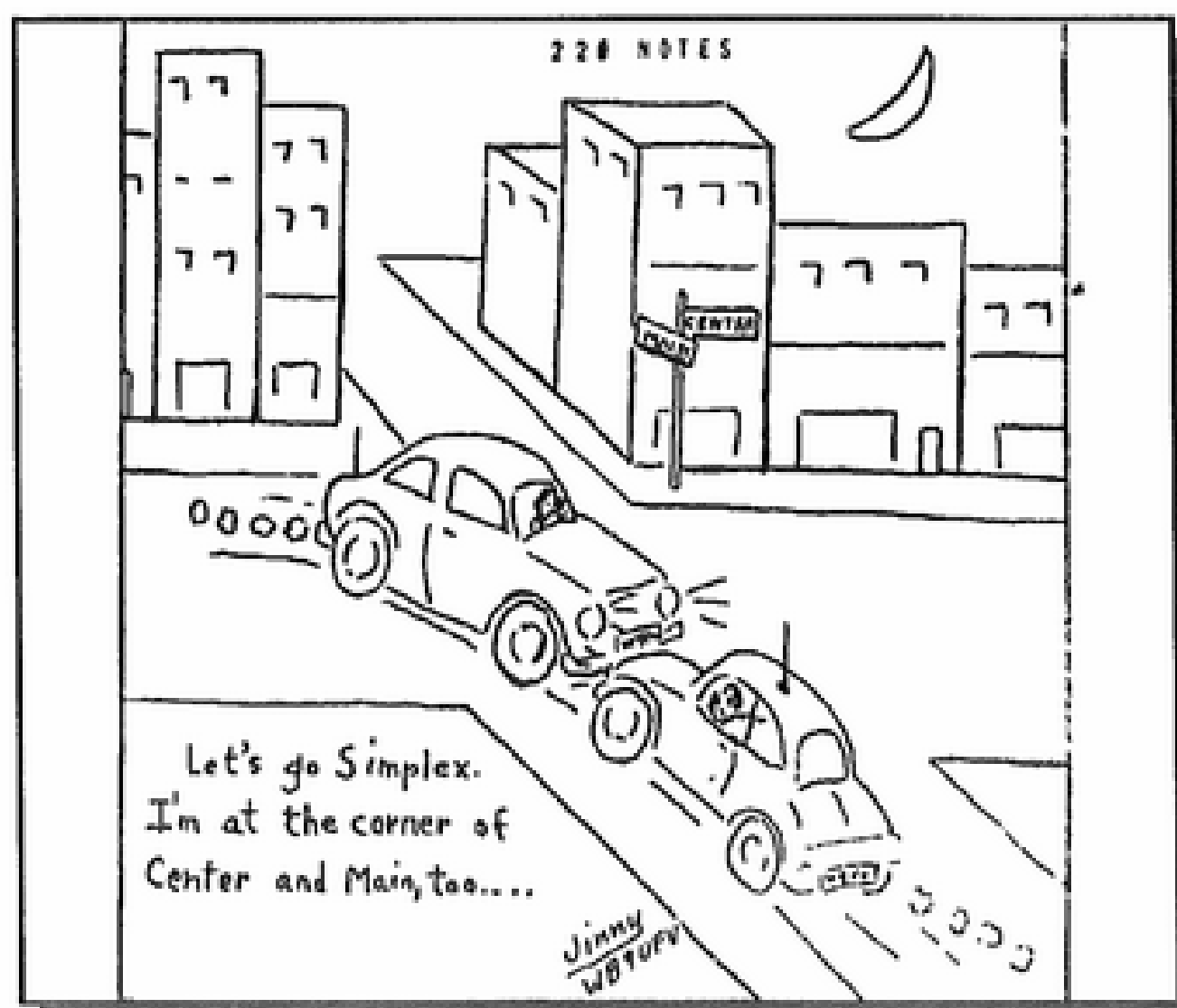
[I wish to thank Ralph, WA5PFK, for sending these news articles so that everyone may benefit from them. I also would like to point out that most of the info presented on this page is a reprint of W5YL.] -Ed.



W5YI Reports, David (WA4NST) and Sharon (N4XLF) Brower of Vero Beach, Fl, have lost a 2yr battle over their 68ft. tall radio tower and antenna. A County judge has ruled for the plaintiffs (seven neighbors) and found the Brower's radio transmissionns to be a noxious and offensive activity and the appearance of the tower and antenna is an annoyance and nuisance to the neighborhood.

The judge also broadly ruled that the tower is a building that exceeds the two story limitation in the deed restrictions which are silent about antenna support structures.

Pending appeal, the judge has stayed his order to remove the radio tower an antenna but, has prohibited the Browsers from making any furthur transmissions from thier home.



MAY 1993

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thur</i>	<i>Fri</i>	<i>Sat</i>
2 GREAT PLAINS MORI VE TEST 1:30PM	3	4 MORI	5	6 Aeronautical Center NoCode Class 6pm	7	8 SCARS
9 WHEAT STRAW	10	11 BICENTENIAL (76ERS)	12	13 Altus Assoc. Cimmaron No Code Class 6pm	14 EARS	15 VHF SAT.VE TEST
16	17 CORA VE TEST 50th & Penn 6pm	18 Autopatch Club	19	20 No Code Class 6pm 146.85- W3PAA club station	21	22
23/ 30	24/ 31	25 CORA 50th and Penn 7PM	26	27	28	29

CONTINUED FROM PAGE 1

ALTERNATE CURRENTS:

I know now what we didn't know then. What he meant was "something that feels like your sitting out on an old air-conditioning unit behind the apartment talking to your best friend."

"What if," I wondered. "We got some pulleys and a whole bunch of string, or rope, or something. Hook it up so we could tape messages to it and pull them back and forth to each other."

"You're crazy. Where are we going to get that much string? And even if we did it wouldn't work. People all over town would be tripping over it and driving their cars into it and stuff. No way."

"Well," I said. "We'd have to find some way to get it up high."

"No way," he repeated. "Its crazy."

But it wasn't, really, looking back. Just two friends trying to figure out some way not to have to say "Goodbye."

I've thought a lot about the passage that I quoted at the top of this article. I don't think that leopard was seeking anything. I think that he just had a dream of reaching. Reaching what? The summit? The other side of the whole dang mountain? Who will ever know? All we know for sure is that he was found near the top of the mountain, not at the bottom. All we will ever know for sure is that he was reaching for something beyond his grasp.

One day, almost two years ago now, I walked into a Radio Shack store for whatever. As I was standing in line to make my purchase I saw in a rack hanging from the wall various books and study aids for obtaining an amateur radio license. The covers of these things proclaimed that with the proper FCC license (and of course with the necessary equipment) I could talk to people around the country, even around the world.

"Man," I thought, while some part of me hearkened back to the long, hot summers of my youth.

"Wouldn't it be something..."



The April meeting did not occur. It was planned for the caravan on the way up to Mooreland. Many of the members were already up there.

The May meeting will be a covered dish dinner at Red Rock Canyon on the south edge of Hinton. Dinner at 1:30 p.m. on Sunday, May 16th due to Mother's Day on the second Sunday. Everyone is welcome with your covered dish and eating set up.

We are all very happy that K5GBN, John Fish, is back home after three bypasses at Baptist Hospital in Oklahoma City. We wish him a perfect recovery. de WA5PFK, Ralph

