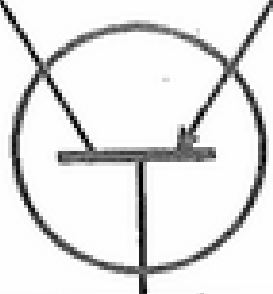


# CENTRAL OKLAHOMA RADIO AMATEURS COLLECTOR AND EMITTER



50¢

VOLUME 9

DECEMBER 1983

NUMBER 107

## Radio Club of America...My Perspective (And a very sad footnote)

Steve, W5VCJ, did a fine job of reporting on the events on November 18 when he, his lovely YL, Clara, and I met in New York and participated in the 75th anniversary of the Radio Club of America, the oldest club of it's kind in the world. I had already started preparing a report but Steve did such a fine job that I substituted his and am taking the word processor paring knife to my original article to leave my two cents worth and my perspective of the events of the evening.

One thing is for sure. I need to start working on Carl, W5IJ, another RCA member, and see if he can't join us the next time. Two of the folks I chatted with asked about Carl: Vic Clark, W4KFC, and Ollie Ferrell, who used to be with Popular Electronics. (He is now Co-owner of Gilfer Associates.)

The last time I had an opportunity to participate in a Radio Club of America Awards Banquet was four years ago when I happened to be in New York on business and met a member of the RCA, Lou Tischler, W2EMM, who invited me to be his guest. Since that time, I have kept an eye on published schedules of events to be aware when another award banquet and my business travel would coincide. This year was a match and it was my good fortune that Steve was planning to make the banquet and agreed to 'invite' me as his guest.

I had been in New York since the middle of the week and managed to finish business early enough to catch the latter part of the last technical session of the afternoon. Arch Doty, K8CFU, had already given a paper comparing relative performance between buried antenna radials and elevated, insulated radials on vertical antennas. When I arrived at the New York Athletic Club, Fred Childs, WOWQ, from E.F. Johnson, was presenting his paper on Amplitude Compandered Single Sideband radio (The paper was "Progression of Narrow Band VHF/UHF Technology".) He concluded his talk with a taped demonstration comparing ACSB with regular FM at increasing distances between fixed and mobile stations.

After the technical presentations, I drifted down to the reception area to start looking for Steve and Clara. During the wait I had an opportunity to meet Stu Meyer, W2GHK, executive Vice President of the Club, President of the IEEE Vehicular Technology Society and President of the QCWA. I had heard a lot about Stu and was pleased to meet him. Earlier I had watched him in action, during the technical presentations, as he moderated the dispute between single-sidebanders and FMers arguing which would prevail. ("Armstrong would turn over in his grave!" said one of the FM proponents.)

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Vic Clark, W4KFC, President of the ARRL was very friendly and conversational. We were exploring names and calls of common acquaintances when Steve stepped up and pointed out Mark Barettella, KA2ORK, and his primary state-side contact during the Grenada invasion, Dr. Steve Lomazow, N2DRA. Vic and I quickly scooted over to those guys to join the lively discussion about that event. (There is a comprehensive interview and related stories in the current QST.)

I then met Ronnie Durham, W5ATB, another Okie (from Tulsa) who is president of Radio Inc. His card reads, "Industrial Electronics since 1935". In this crowd he is just another young whippersnapper, but has gained sufficient recognition that he was named Fellow at the banquet.

The banquet proceedings were Chaired by Freddy Link, W2ALU, President of the group. Thirty persons were awarded citations as fellows. Eight honorary awards were presented in recognition of those who had accumulated special achievements. It is interesting to note that five of those eight are licensed amateur radio operators.

After the banquet, I bid Steve and Clara good night and walked to my hotel about a mile from the Athletic Club. We didn't have to head for the airport until about One P.M. the next day so I used the time to do a bunch of window shopping. New York is a big town but who did I run into on the street but Steve and Clara! I had arranged for a limo to pick us up and left a message to that effect at their hotel and met them as I was leaving. The rest of the trip was uneventful. (The flight left an hour late but that is uneventful.) Unfortunately, our late arrival in Oklahoma City completely eliminated the possibility of making even a late arrival at the Lake Thunderbird Weiner Roast. I hope that again next year I have the problem of deciding which to attend.

Sad footnote: Rather than go back into the above story and rip it up after hearing about Vic Clark's death, I thought I would leave the joy of the occasion intact as is best with good memories. I am, of course, particularly sad to hear of his passing because of the personal contact made just a week prior. Vic was an easy person to like, I think. In the crowd of the reception, I am sure Vic had many friends he was anxious to see but he gave me absolutely no feeling of urgent brevity that is common during such occasions. He was as congenial as if I was the only one in the place to talk to. That is a valuable and rare trait that, I'm sure, contributed to his success and accumulation of friends. Though I am sad to hear of Vic's passing, I am glad I had a chance to meet him and perhaps learn from his example. Joe, K5JB



## CORA COMMENTS

There'll be some changes made today, goes an old song and the same is true for Ham Holiday in 1984.

At the CORA meeting the other night there were two very attractive young ladies present to present their offering for 1984. One was from the Myriad and the other from Lincoln Plaza Convention Center. Well, when everything was said and done a vote was taken and for the first time in memory there was a unanimous vote to move to Lincoln Plaza for 1984. Now there haven't been any contracts signed yet but the spirit and intent was there and we are sure that everything will be taken care of soon.

There was just one thing that had to be changed and that was the date and it was decided that since both places were already booked for the last week end in July then we would just have to take what was left. So, we are going to move Ham Holiday up one week. That is for this year. I'm sure that the committee will take the necessary steps to nail down next year, that is 1985, so we can go back to our regular date.

Just to give you some idea of the cost of putting on a gathering as big as Ham Holiday, it will cost \$3500. That is all, except for coffee which will be \$13 a gallon. That sounds like a lot of money but when you compare the two places and the prices that isn't so bad. It would have cost several hundred dollars more to go back to the Myriad and if I read the letters and articles in C&E right that will be a whole lot better, what with free parking, a theatre for the Style Show, and a banquet and dance area thrown in, all in the same area.

There will be more details later. With the above attended to the group voted on and passed a few other housekeeping items and with a whoop and hurray broke up.

There will be NO meeting of CORA until January 1984

HAM HOLIDAY 1984

Another month has already gone by and before we meet again Christmas will have come and gone. From all of us to all of you, have a MERRY CHRISTMAS and a very HAPPY NEW YEAR.

After my last C & E article some of you were kind enough to give us some input. Thanks! We can only have the kind of Ham Holiday you want with your help.

We would like to thank Sandie from the Myraid and Diane from the Lincoln Plaza for coming to our meeting. They both gave an excellent presentation on their respective facility. After careful consideration CORA decided Ham Holiday will be at Lincoln Plaza.

At this time Cora plans to have all activities on the same premises. Available will be over 3000 FREE PARKING SPACES, a roped off area for motor homes, restaurants, a Coffee Shop and many other services, all available in the same complex. This will truly be a Ham Holiday for the entire family.

We would like to have a record turnout this year and with your help, we can. So please, everyone, start planning now. Tell all of your friends in Amateur Radio that you want to see them at Ham Holiday '84.

The next CORA meeting will be Jan. 24, 1984. Now that we have the facility, we can start on the other details that go into making Ham Holiday. Would you like to express your feelings? Our meetings are open and the welcome mat will be out.

HAM HOLIDAY 1984 - JULY 20,21,22, 1984 - LINCOLN PLAZA INN, 4445 N. LINCOLN BLVD, OKLAHOMA CITY, OK.

Remember - Ten small words say it all.

If it is to be - it is up to me.

See you at CORA,  
Regay - WNSNWX



## Mike's Cycle Salvage



2212 SW 29th OKC 631-7223

**New & Used Parts**

**We Buy Salvage**

Mike Kramer KA5NUP

146.025 / 146.625 REPEATER

FEEL FREE TO USE IT

# THESE CORA MEMBER CLUBS PROMOTE AMATEUR RADIO

**1 AERONAUTICAL CENTER ARC**  
**MEETS:** 8:00pm First Friday. Flight Standards Bldg., FAA, S. Macarthur  
 PR K5LDI Tom Mangham 677-5291  
 VP AF5X Jess McKenzie 329-1543  
 SE KA5JCX John Mooney 794-8519  
 TR K5RJR Larry Vorhels 789-9629  
 EDITOR: John Mooney, KA5JCX 794-8519

**2 OKLAHOMA CENTRAL VHF CLUB**  
**MEETS:** 10:00am Third Saturday. Red Cross. 10th & Hudson (Back door) Okla City.  
 PR WA5HTL Paul Asplin 787-4286  
 VP KD5IS Jerry Wetmore 524-5080  
 SE K5JB Joe Buswell 732-0676  
 TR W5KE Ellard Foster 789-6702  
 EDITOR: Joe Buswell, K5JB 732-0676

**3 MID-OKLAHOMA REPEATER, Inc.**  
**MEETS:** 8:00pm First Tuesday. Okla City EOC. 4600 N Eastern  
 PR N5EPV Bob Allen Unlisted  
 VP KD5DL Holly Stewart  
 SE KA5CXW Fred Taylor 528-1537  
 TR W5KOZ Sid Gerber 737-1050  
 EDITOR: Susie Atkinson, KA5FED 842-8014

**4 OKLAHOMA CITY AUTOPATCH ASSOCIATION**  
**MEETS:** 7:30pm Third Tuesday. Okla City Fire Training Center. 800 N Portland  
 PR WD5FKF Reuben Castleberry 691-1070  
 VP WB5NDO Kathy Whited 799-1457  
 SE N5DLM Vicki Adkins 722-6195  
 TR KE5M Ron Recer 341-7030  
 EDITOR: Kathy Whited WB5NDO 799-1457

**5 OKLAHOMA UNIVERSITY AMATEUR RADIO CLUB**  
**MEETS:** 7:30pm Second Tuesday (Sep-May) 119 Wilson Center. 1334 S Jenkins  
 PR KA5BAY Luke Noah 325-1775  
 VP KE5N John Wustenberg 325-2382  
 SE KA5COI Peter Richeson 329-3217  
 TR KA5LZN Greg Smith 366-1641  
 EDITOR: Greg Smith, KA5LZN 366-1641

**6 ALTUS AREA AMATEUR RADIO ASSOCIATION**  
**MEETS:** 7:30pm Second Thursday North Main Fire Station (CD) Altus  
 PR KA5MPK Gary Alexander 482-0857  
 VP  
 S/T KA6RTX Bill Flattery 482-1155  
 EDITOR: Bill Flattery, KA6RTX 482-1155

**7 BICENTENNIAL (76ers) ARC**  
**MEETS:** 7:00pm Second Tuesday. OG&E Bldg. SE 3rd & E. K. Gaylord Blvd.  
 PR N5BFD Jim Hopkins 947-0043  
 VP WD5JNT Ted Vanlaningham 262-1675  
 SE N5AUH Jerry Sproul 354-2061  
 TR WA9AFM Tom Webb 737-6716  
 EDITOR: Bruce Goff, KC5CR 751-7192

**9 WHEATSTRAW AMATEUR RADIO CLUB**  
**MEETS:** 2:30pm Second Sunday. Location varies. See club section.  
 PR KA5FUU Tom Johnson (El Reno) 262-5631  
 VP KA5DUO Leo Peil (Canton) 886-2996  
 S/T WA5PFK Ralph Wilder (Watonga) 623-4521  
 EDITOR: George Maschino, K5GGL 263-7614

**12 SHAWNEE AMATEUR RADIO CLUB**  
**MEETS:** 8:00pm Second & Fourth Tuesday Shawnee City Hall (EOC)  
 PR KD5NX Jay Tingler 273-3033  
 VP N5CGZ David Stanley 273-4226  
 S/T W5TQZ Herbert Holton 598-5984  
 EDITOR: Earl Couch, WB5ZBA 589-3212

**13 KAY COUNTY AMATEUR RADIO CLUB**  
**MEETS:** 7:00pm Third Thursday Ponca City EOC  
 PR WB5YRN Delbert Foiles 762-4479  
 VP WA5UBO Marsh Pronneke 363-2526  
 S/T KA5PUB Glenn Bishop, Jr.  
 EDITOR: Rick Long, WD4CEP 767-1871

**14 CIMMARON AMATEUR RADIO ASSOCIATION**  
**MEETS:** 7:00pm Second and Fourth Mondays. Place varies. See club section.  
 PR WB5ECM Dennis Painton 764-3599  
 VP N5FUP Steve Schoonmaker 886-3274  
 SE N5FMH Nadine Painton 764-3599  
 TR N5FUR Ruth Simpson 227-2791  
 EDITOR: Major Bailey, K15P 227-2061

**15 SOUTH CANADIAN AMATEUR RADIO SOCIETY**  
**MEETS:** 9:30am Second Saturday. Red Cross Bldg., North OU Campus. Norman  
 PR KA5MIZ Bob Rabin 360-6996  
 VP KA5EPJ Ken Neptune 321-7789  
 SE WD5GTC Gene Johnson 321-6759  
 TR N5BEW Ken Esadoah 329-4667  
 EDITOR: Sam Barrett, WA5RPP 321-2601

**16 EDMOND AMATEUR RADIO CLUB**  
**MEETS:** 7:00pm First Thursday. See club section for location and type.  
 PR WD5DYI Mark Northcutt 755-4672  
 VP WB5MLX Glen Cochran 942-7148  
 S/T WB5UIY Stan Van Nort Unlisted  
 EDITOR: Stan Van Nort, WB5UIY

**18 GREAT PLAINS AMATEUR RADIO CLUB**  
**MEETS:** 7:30pm First Tuesday Civil Defense room, Woodward courthouse.  
 PR WB0PGD Ron Tice 994-2138  
 VP KOCIO Larry Ellis (316) 582-2889  
 SE WB0QGW Carla Tice 994-2138  
 TR NC5C Gerry Ford 256-5382  
 EDITOR: Carla Tice, WB0QGW 994-2138

**10 EDMOND AMATEUR RADIO SOCIETY**  
**MEETS:** Varies. See club section  
 PR N5DBM Ken Stepp 341-4874  
 VP KA5MJT Mike Smith 373-1120  
 S/T KB5RR Clarence Dollmeyer 341-7163  
 R TRUSTEE Bill Wright, KC5GN 341-6076  
 EDITOR: John Keeling, WA5ZGM 340-1253

**20 ARDMORE AMATEUR RADIO CLUB**  
**MEETS:** 8:00pm First Wed. Red Cross Bldg. Informal, 8:00pm other Weds. 221 9th NW  
 PR WB5VBK Fred Innis 223-1709  
 VP WD5FZD John W Merlyn 223-9543  
 SE W5JCX Jim Chilcoat 226-6816  
 TR W5BLW Charles Dibrell 226-0589  
 EDITOR: Glen Hamilton KE5ES 226-4379

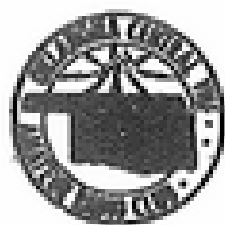
**CENTRAL OKLAHOMA RADIO AMATEURS, Inc.**  
**MEETS:** 7:30pm Fourth Tuesday. OKC Fire Training Center. 800 N Portland  
 PR WN5NWX Reggy Whited 799-1457  
 VP K2GKK D. C. Macdnald 672-4947  
 SE N5BEQ Jim Buswell 236-0368  
 TR WDOFTM Linda Callison 751-3620

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 Bob Graham, WB5NSV, 677-8685



Club  
NEWS

VHF  
The Voice of the Ham Radio  
Community

### Minutes of November Meeting

Meeting was called to order at 10:00 A.M. by President Paul, WA5HTL, with 12 members and guests present.

Motion was passed to remove the busted Tri Band beam and install 20-15-10 Meter Inverted 'V's, retaining the tower.

Bob, W5HXL, gave the CORA report. VHF Club has publicity for Ham Holiday '84.

Discussion on Club Christmas party followed. It will be Saturday, Dec. 17, 7:00 P.M. at Red Cross Headquarters. Charlie, WA5JGU, was volunteered (in absentia) to provide punch for the party. Bring covered dish, snacking material and cash donations for Crippled Children, in lieu of presents.

Meeting adjourned at 10:54. (Minutes courtesy of Bob, W5HXL)

### Christmas Party

For the benefit of you who can't find notices like this in the C&E, here it is again:

The VHF Club Christmas party will be at Red Cross Headquarters on Saturday, Dec 17, at 7:00 P.M. Bring Covered dish, snacking material & cash donations for Crippled Children in lieu of presents.

The Central Oklahoma VHF Amateur Radio Club extends it's wish for happiest of holidays to all of our brother and sister amateur radio operators, and their families. Joe, K5JB

### The Cookout - A Report

On Saturday night, Nov 19, there was an annual 'gathering of the faithful' at Little River State park on Lake Thunderbird in Norman. Bob, W5HXL, reports that there were about 26 people present for the Weenie roast and that three trailers; his, Gene and Rosie's and Charlie and Marie's, spent the night. Charlie, claimed that he won the 'great boat race' that was run earlier in the day but Gene has been unavailable for comment to verify this. My favorite quote regarding this came from Gene when he was asked if he was going to wax his boat's bottom. He responded "No, I'm gonna wax somebody else's bottom when we have the race."

Sorry I missed it. Steve and I were delayed an hour leaving New York's Kennedy Airport and by the time we arrived in Oklahoma City I'm sure the weenies and campfires were cold.

Joe, K5JB

### Radio Club of America

On November 18th, in New York City, Clara and I had the pleasure of attending the annual awards meeting of the oldest Radio society in the world, the Radio Club of America, founded in 1909 by a group of young wireless enthusiasts, experimenters, scientists, engineers and inventors. Today the membership numbers over 800, pioneers of the industry and those who have been elected to membership by virtue of some contribution to the advancement of the art of radio (and electronics), by invention, manufacturing, education and application.

I was also accompanied by Joe Buswell, K5JB, who was in New York on business and came as my guest. It was his second visit to an awards banquet and he claimed it was his best, particularly since it was the 75th anniversary of the club, and thus, a most memorable one. I plan to nominate him for membership, having checked on the qualifications. Another of our VHF Club members, Carl Drumeller, W5JJ, is also a member.

A number of awards were made to outstanding members for their significant contributions. Amateur radio was lauded by many as a valuable asset in their careers. One of those honored, whom many amateurs will recognize, was William J. Halligan, Sr., who founded Hallicrafters. The former president of Hammarlund, Stuart Meyer, W2GKH, who is also president of QCWA, presented and received awards. Also Vic Clark, W4KFC, President of ARRL, was made a fellow and presented KA20RK/J3, Mark, who was one of the limited sources of information from the island of Grenada during the recent invasion by U.S. Forces. He was in contact with N2DRA, who was also introduced, for 36 sleepless hours to provide the world with news from Grenada. The Cuban troops were just across the street and Mark was confined to the campus of the medical school, operating on emergency power most of the time. Both had high praise for the efficiency of the U.S. troops in the rescue of the 600 students at that school.

This is just a brief digest of the quality of the event in New York that evening. Just rubbing shoulders with the people who have made radio, television and electronics what it is today, was quite a rewarding experience.

T.W. (Steve) Stevens, W5VCJ

HR ARRL BULLETIN NR 116 FROM ARRL HEADQUARTERS  
NEWINGTON CT NOVEMBER 26, 1983  
TO ALL RADIO AMATEURS BT

RADIO AMATEURS THROUGHOUT THE WORLD MOURN THE SUDDEN PASSING, ON NOVEMBER 25, OF OUR BELOVED ARRL PRESIDENT, VICTOR CLARK, W4KFC, AFTER A SUDDEN MASSIVE HEART ATTACK. VIC HAD SERVED AS ARRL PRESIDENT SINCE 1982, AND HAD BROUGHT TO THE POST THE PERSONAL QUALITIES WHICH MADE HIM ONE OF THE MOST RESPECTED AND BEST KNOWN MEMBERS OF THE WORLDWIDE AMATEUR RADIO FRATERNITY.

A MEMORIAL SERVICE IS SCHEDULED FOR 2 PM WEDNESDAY, NOVEMBER 30, AT THE CHRIST CHURCH OF WASHINGTON, 3855 MASSACHUSETTS AVE, WASHINGTON, DC. THE FAMILY REQUESTS THAT NO FLOWERS BE SENT BUT THAT MEMORIAL CONTRIBUTIONS IN LIEU OF FLOWERS BE MADE TO THE ARRL FOUNDATION, THE PURPOSE OF THE MEMORIAL FUND TO BE DESIGNATED LATER. ARRL FIRST VICE PRESIDENT CARL L. SMITH, W0BWJ, ASSUMES THE OFFICE OF PRESIDENT FOR THE REMAINDER OF THE TERM.

### Packet Radio Status Report

There is not much to report because the Tucson Amateur Packet Radio (TAPR) Terminal Node Controller (TNC) kits have not arrived yet. Apparently, the hardware is available but the documentation was not ready on schedule. The first two kits were to be shipped about the first of November so we are on the lookout. Five of us have placed deposits for TNC kits so a fairly complicated Local Area Network (LAN) can be established. Jim, KB5XN, in Tuttle is planning on connecting his TNC to the 10/70 repeater to permit network access by users who don't have packet TNC's. I have requested a copy of the Bulletin Board program that was custom designed by Lynn Taylor, WB6UUT, to take advantage of the special features of Packet radio. This particular bulletin board is on the air in San Diego and has been demonstrated at some of the packet conventions. It is written in Pascal and has prompted me to get out the books and refresh my knowledge of that language and operating system. (Jim, let's convert it to 'C' when I get it!)

GLB, the synthesizer company, is advertising a TNC for about \$150. It currently supports only the Vancouver protocol but software is supposed to be ready by the end of the year to run the AX.25 stuff also. It has a Z-80 microprocessor which would be a little easier for me to manipulate than the 6809 in the TAPR board, but what the heck, there are a lot of good 6809 programmers around, right COCO owners?

I gave a data communications talk at the 76'ers meeting and got in a bit over my head because there sure were some good questions, like "What does this have to do with Amateur Radio?" That is a darn good question. There are a few thinly disguised reasons that have to do with traffic handling, but the basic application, in my case, is to satisfy my cur-

iosity about the intrinsic nature of communication by unusual means. During the talk, I assumed too much about Radio Teletype common knowledge. There certainly seems to be a lot of recent interest in RTTY (listen to 20M sometimes), particularly since personal computers are becoming so popular. It might be a good idea to review some of the RTTY basics from time to time so the advanced methods will be more understandable.

Most local exposure will come from the antics of a few on two meters who connect a Bell 103 compatible modem between a terminal or computer and the Transceiver and blast away with that horrible sounding deedle-deedle. There are some fundamental differences between the ways this can be done (besides different codes...Baudot and ASCII).

These differences are like the tower of Babel. If various modems (or Terminal Units, if you prefer) used are not compatible, growth is impeded because synergism of having the whole gang together is missing. Lately, I joined in experiments to use Bell 103 tones because there are a lot of those kinds of modems around. To make things simple, we stuck with originate tones for both receive and transmit, using the modems in the analog loopback mode. It worked great. All I did was let an acoustic type modem hear what was coming over the receiver speaker and when it was my time to 'talk', held the microphone up to the modem's speaker. When I was receiving, I stuffed an inert telephone handset in the speaker socket to stifle the tones. No soldering, wiring, nothing!

Recall that to send itty bits, one has to send a signal that changes state, in some manner, between two values, Mark and Space, Hi and Low, On and Off, Phase Zero and Phase One, or whatever. Bell 103 originate mode tones (transmitting) are 1270 Hz for a Mark and 1070 Hz for a space. Normally, Bell 103 is used full duplex and a second set of tones (2225 Hz Mark and 2025 Space) is used on the path going the other direction. Since it is rather difficult to go full duplex on 2 Meters, we corrupt the Bell 103 standard a bit and use the same tone pairs to go both directions. We are actually transmitting using the originate mode and receiving using the Answer mode. My first plan was to connect a relay to the modem and switch mode with the PTT line from the transmitter. Discovery of the analog loopback (test) feature made this unnecessary. The modem was designed (as are most modems) to perform a self test if the user has difficulty getting things to work. Flipping switches to self test and originate put it on the air painlessly. See ya next month...Joe, K5JB

## Q. R. Zedd

### ANNOUNCING THE FIRST ANNUAL WORLD DX TOUR HOSTED BY Q. R. ZEDD, A5A

Departing Norman, Okla., December 5, 1983  
Returning On or About January 5, 1984

#### Limited Reservations Available!

Mr. Q. R. Zedd, A5A, of Honor Roll Ranch, just a hoot and a holler south of town, announces the first annual world DX tour for deserving DXers, to take place over Christmas, 1983, and New Year's, 1984

The lucky few who get reservations for this astounding tour will not only get to work DX from the prime locations around the world, but will get to see and perhaps even log for the greatest, finest, truest, DXer who ever lived, Mr. Q. R. Zedd himself.

Tondelayo Schwartz, nubile, blonde, 20-year-old QSL secretary to Zedd, will also make the trip. Miss Schwartz will have a new hotpants wardrobe for the occasion.

#### Highlights of the tour:

\* See 18-wheelers run over motor cars traveling 70 miles per hour from picturesque Mount Williams, in Norman!

\* Work DX with the polar bears from Heard Island!

\* Joust with the Knights of Malta while the great one himself works 40K!

\* Spend Christmas day with Santa Claus and Mrs. Claus in the Claus shack at the North Pole!

#### The tour schedule:

Dec. 5, 1983 -- Depart Honor Roll Ranch. (Buffalo burger barbecue and Colorado KoolAid the evening previous.)

Dec. 6 and 7 -- DX from Mount Williams, Norman.

Dec. 10-13 -- Christmas Island.

Dec. 14-17 -- Vietnam.

Dec. 18-22 -- China.

Dec. 23 and 24 -- Siberia.

Dec. 25 -- North Pole with Santa Claus.

Dec. 27-28 -- Mongolia.

Dec. 31 -- Festive New Year's Eve party in beautiful downtown Afghanistan. (Tap dancing by Miss Schwartz.)

Jan. 2-3, 1984 -- Heard island.

Jan. 4 -- "Rare site to be announced."

Jan. 5 -- Return to Honor Roll Ranch.

**RESERVATION INFORMATION:** Deposit of \$10,000 required in advance. Mail bank draft only and SASE for all particulars to:

Q. R. Zedd, A5A,  
Honor Roll Ranch,  
Norman, Okla., 73069

Deadline for reservations: Dec. 1, 1983

## CIMARRON A.R.A.

With the November meeting came the election of officers for CARA. They are as follow; Pres. Dennis Painton WB5ECM, V.P. Steve Schoonmaker N5FUP, Sec. Nadine Painton N5FMH, Treas. Ruth Simpson N5FUR. Congratulations to all. We all know they will do a great job.

Congratulations are also due Ed Arnote, KA5QBE for his upgrade to technician. Three more novice tests were given in the month of November, one by N5FUR (her first) and two by K15P. The ranks continue to grow.

Plans were made for the annual CARA Christmas dinner (ham-feast) to be held Saturday Dec. 10. The dinner will be covered dish with the club treasury providing the meat.

Jack KD5YB and Major K15P took copies of ARRL radiograms to the Fairview Fellowship Home for the senior citizens to fill out for Christmas messages. Last years response was good, maybe this years will be better! We suggest that other clubs do the same.

Present at the November 10 meeting were; N5FUO, N5FUR, N5FUN, N5FMH, N5FUP, KA5RTW, KA5QBE, WB5ECM, KD5YB, and K15P, also present was Reeta Martin, license pending.

Before I forget it, my XYL N5FUN, was elected as CARA's activities chairman.

Check in with us on the weekly two meter net on Thursdays at 8:00 PM local time on 145.45. K15P

-----CORRECTION-----  
In last months C&E the schematic on page 21 should be changed as follows; replace R6 with a 1N914 diode. The anode connects to pin 3 of U2. Sorry for the inconvenience.



The November Wheatstraw meeting was called to order Nov 13 at the usual time by president Tom KA5FUU with about 30 members and normal visitors present and a number of friendly natives wandering in and out. The meeting was at the Center of Family Love which is a home in Okarche for the mental retarded.

We discussed several items of business, the main one being the club Christmas party. This meeting is always looked forward to and well attended. This year it will be at the End of Main in Watonga and is reported to be a very good place to eat. The agenda will start off with a dinner and will be followed with the monthly meeting. Chief item of business will be the election of officers for the coming year.

I expected we would have nominations this month as we always do, but it looks like Tom KA5FUU wanted to change how we do things and I guess that is the presidents prerogative. Any way he did. In the past we always had nominations in November and elections in December. I was all set for the annual starting of the great american railroad but 1983 went down in the history book a bit different. Instead of opening the floor for nominations, Tom appointed a nominations committee to have a slate to present next meeting. I sure think he was afraid of the railroad job. He picked out his crew so he could avoid being nominated. JUST WAIT!! He has to allow nominations from the floor next meeting. Hope I can find my copy of the club constitution in case I need it.

The void at the meeting was caused by the absence of Johnny and Margret K5GBN and WA5RLP who were out of state on vacation. They had sent word back to the meeting via HF radio to say hi to everybody and they are having a good time.

We enjoyed the meeting and are looking towards the next one. See you then and don't eat too much turkey...

k5ggl





COCO

NOV. Minutes

#### Club Officers

PK - Bob Langmacher - 352-4059  
VP - Tom Stott - 324-5086  
SEC- Bill Wright - 341-6076

#### Meeting Place

Red Cross Building  
10th and Hudson  
First sat. at 9AM  
Dues \$5.00/year

Meeting called to order at 9:06AM, 11/5/83. There were some faces notably missing from this month's meeting. Holly went deer hunting and HAM radio operators present, reported a member of his hunting party bagged a ten point buck.

President Bob Langmacher report on the RainbowFEST at Fort Worth. Bob Pace and Bob Graham also attended. From the sound of things they sure had a good time. The Grand Fandango of their weekend was a tour of the Radio Shack plant. If I understood Bob, they make one Color Computer every minute. I wonder where all those color owners are? We only have about half that number in our club (joke).

If you would like a white case for your COCO, then you need the following information.

Parts House AZ6858  
Case Top # MC5104-4000-1403-1963  
cost \$11.77  
postage \$ 1.50  
phone- 1-817-870-5662

T.J. McNeely made a report on 'ELITE-CALC', sound like a good program.

It is also reported that the Flex-Net is back up and working.

Leo Hogard from Ponca City won the door prize drawing, a spike protector receptical.

Bob Helms from Midwest City, has been writing some very fine programs and has shared them with the club. Autoinv, Dsklibry, Taplibry and Quicksort. These will inventory your disk or tapes and give you a printed copy of what programs you have and which disk they are on. Copies will be on next month's meeting tapes.

NOTICE \*\*\* Look at the label on your C&E. There you will see some numbers, two sets in fact. Its the second set I want to draw your attention too. Mine reads 108312, the 10 is the club's number, the 83 is the year, the 12 is the month of my expiration date. This means, unless I renew my membership with the club, Dec. will be my last copy of the C&E. I'll sure be at the next meeting with my \$5.00.

UTILITY LIST and LIST MOD are two programs that will prevent the screen from scrolling fast.

Poke 111,254:dir will cause the Disk directory to be printed to the printer.

The meeting was turned over to Bob Pace and Bob Graham for an excellent program on the RS232 I/O.

PS: On Sat. 11/12/83, about 6-o'clock PM Holly got his Deer, --- Finally. 108 lbs., 8 point buck.

```
*****
*           FOR SALE           *
*           ' PRINTER'        *
*   TI-825           $1000     *
*           CALL              *
*   ROD RUNYON      # 360-4140  *
*****
```

## REVIEW of SPELL- N - FIX

Spell N FIX is written by Peter A. Stark, Star - Kits, Mt. Kisco, N. Y..

This is a program as the name implies, to check text files for spelling and typographical errors. This is done by comparing each word in the text to a 20000 word dictionary. Incorrect word can then be displayed on the printer or screen. Words that are correct but not in the dictionary can be added right from the menu.

RUN "SPELLFIX" -- The first menu reads:  
ENTER FILE NAME OF TEXT FILE TO  
BE PROOFREAD -

If you have one drive, then switch diskettes and enter file name, as: name/ext

If you have two drives add :drive number. If no ext. is used the program assumes an TXT ext..

After the file is open the following message appears.

WHAT KINDS OF WORD DO YOU WANT?

A = ANY GROUP OF CHARACTERS ENCLOSED BY A  
SPACE OR CR, OR

S = SELECT ONLY WORDS WHICH ARE REASONABLE  
ENTER A OR S

A - All mode, will read any group of characters separated by a space, only punctuation marks are treated differently.

S - Select mode, is more selective and looks for complete words.

For most applications use the All mode.

After you make your selection the computer prints:

PROCESSING TEXT FILE... PLEASE WAIT  
After the file is read:

SOURCE TEXT FILE HAS BEEN READ  
TOTAL NUMBER OF WORD = ?

ENTER FILE NAME OF DICTIONARY FILE

Enter DICT or DICT/TXT:1 if the dictionary file is in drive one.

After opening the dictionary file, spell-n-fix will want to know whether or not to update the dictionary by adding any new words to it.

Answer no for now, and spell-n-fix will start processing the text against the dictionary. Each time the program encounters an unknown word it prints it out. Under the word are the letters I, M, X, or Q.

I = Ignore and go to next word  
M = Mark this word incorrect  
X = mark all words incorrect  
Q = Quit spell 'n Fix

Also if you had answered yes to adding words the the dictionary two more letters would be there, A and D.

A = add this word the dictionary  
D = add all words to the dictionary

Next, the program will like to know what to do with the words you marked.

WOULD YOU LIKE TO WRITE A NEW  
TEXT FILE WITH INCORRECT WORDS  
EITHER CORRECTED OR MARKED  
ANSWER Y OR N

If you answer no, spell n fix will assume you are finished and stop. So you should answer yes here. Next it will need to know --  
WHICH - CORRECTED OR MARK, ANSWER C OR M

If you wish the words corrected it will allow you to correct the spelling and put the word in the text. If you wish the word marked, it will put \*\*\* next to the word in the text. This will allow you to correct the word back in your word processor.

After it goes through the whole text, it'll ask for the file name of the file BEING READ. Then the name of the NEW file to be generated. Give a somewhat different name to the new file. When you finish marking or correcting the text, spell 'n

CONTINUED

# The South Canadian Amateur Radio Society



UNIVERSITY OF OKLAHOMA

Amateur Radio Club 146.28/.88

## SCARS HOLDS ANNUAL ELECTION.....

At the regular monthly meeting of the South Canadian Amateur Radio Society, which was held on November 12th at the Red Cross Building in Norman, officers were elected for the calendar year 1984.

The following persons were elected by a unanimous vote of those present:

President- Bob Rabin, KA5MIZ  
Vice Pres.- Ken Neptune, KA5EFJ  
Secretary- Gene Johnson, WD5GTC  
Treas.- Ken Esadooah, N5BEW

Congratulations to the new officers. With good people such as these, the club should enjoy a great year in 1984.

In other business at the meeting, it was disclosed that the club has received a \$250 donation from the Themis Foundation.

## SCARS CHRISTMAS PARTY.....

As announced in the last issue of the Collector and Emitter, the annual Christmas party for SCARS will be held on December 9th at the Crosstimbers Restaurant in Norman. Crosstimbers is located on south Classen Street (US-77) in Norman. Please get your money in ahead of time to Bob Fields, N5ALG.

## SCARS MEMBERS TOUR MICROWAVE FACILITY.....

After the November meeting, SCARS members were treated to a tour of the microwave relay facility, which is located southeast of Norman. The tour was arranged by John Nelson, W5AVK, and was led by Mr. Kenney, who works at the station. SCARS thanks John and Mr. Kenney for arranging this activity.

SEE YOU AT THE CHRISTMAS DINNER- December 9th.

-wa5rpp-

fix is going to make a new file on the disk with what ever name you just gave it. Spell 'n fix is finished, hit any key to return to basic.

This is an excellent program and works surprizingly fast. You can proofread a 500 or 600 word text in about 10 minutes and that includes correcting the words.

That care and happy computing..

### \*\*\* Notes \*\*\*

Bob Pace has received the new keyboards and has installed some already. He reported some good news and some bad news. Bad news first -- If you have an old computer, D or E board, then you'll need an extra kit to use the new keyboard. Bob said the kit is'nt real hard to install but takes about an hour, there are some resistors to go under the computer board, that means taking the computer completly apart. Bob is going to try to include the extra kit with the keyboard at no extra cost for those who have D or E boards, \$40 for both kits, this means its at Bobs cost so only those who have the old boards will be offered this deal. Installation of this board will cost extra.

Now the good news, those people with F boards have it made, its no problem to install the keyboard, just plug it in.

## NEXT MEETING - DECEMBER 13TH

The November meeting of the OU Amateur Radio Club included some good discussion of activities for the spring semester; especially activities that will increase the awareness of the club's existence with the student population. We will be trying to help with the new student orientation, and plan to set up a demonstration station in late January or early February.

With this increase of club activity on campus, we are looking at expanding our club station by purchasing a 2 meter rig. The club owns a 4 element vhf beam which will be added to the tower at the club station. The club's hf beam has been taken off the tower for some fine tuning and maintenance. If the present good weather continues after the Thanksgiving holidays, we should have our station in full operation again by Christmas.

Dues were a topic of discussion at the November meeting and will be discussed also at the December meeting. Further planning for spring activities will also be discussed. The meeting will be at 119 Wilson Center, 1334 S.Jenkins beginning at 7:30 p.m.

'70 de KA5LZN

I HEARD: NDO swapped Reggie for Fred.....TAW's xyl is the jealous type.....SJV is putting up a tent .....M's #2 drive is flaky.....FEX is out when he's in.....BQX has cabin fever....FM only offers to buy lunch when his guest is miles away.....NWX devacationizing.....IS is loose.....DDB is a people watcher.....LBI will stand up to anybody .....BQX lost in a cat hair.....CTT up at 4 in the morning.....DDB hiding behind his sunglasses.....BJS asking NWX what her problem was.....NWX refusing to tell BJS what her problem was.....WZ telling M to be a good boy.....ETA checking inputs .....FZK runs over anyone who gets in his way.....GKK got a bent ear from Grady.....CWT's head got in the way.....NWX over.....AQY slipping out of his pants.....CSM blowing his nose.....NZS heard that.....NWX really hated to hear that .....ISS isn't what he used to be.....GOM choking back a he-haw, oh me.....GKK looking through his drawers.....DDB wouldn't touch that with a ten foot pole.....NWX putting on a side-show.....TAW out chasing around.....NAV overdid it but felt like it anyway.....NZS smoking ribs.....M is always ready.....BQX impersonating Willie.....FM is on short rations.....DDB is a people watcher .....ISS going home to play with momma.....CTT didn't want SJV to hear that.....ETA planning to get even.....NWX over.....JGU oh golly.....JL has no vices.....CSM is a toad.....LBI doesn't need much.....IH understands.....DDB has no intelligence whatsoever.....GL tries to be perfect.....JCB day-dreaming.....CTT and eeh .....AQY getting some more goo.....JL isn't old enough to play golf.....GKK knows nothing about nuts .....CTT thinks BQX is dumb.....NWX talking through a fishbowl.....CTT and eeh.....BQX had a behind and didn't know it.....SJV let the cat out.....WZ really blew it.....ISS gets nextto whoever he can.....BQX on the road again.....NWX went limber.....AQY has a very remote vfo.....GKK didn't know I-35 crossed I-240.....IH is an optimist.....WZ has a thing for seagulls.....GL throwing his clothes on.....NWX over.....AQY wants to keep half his chug holes.....CSM has 5 ends and 4 pieces.....GKK can get a new hair-do on his patio.....WZ went to the dogs.....GL wanting DLM to take a hammer to IH's rig.....BQX on the road again.....LBI's xyl's battery runs down.....GKK will fix it.....IH and GL arguing over who got DLM.....DDB went underground.....CTS stays away from serious stuff.....NWX with FEX flutter.....GKK wasn't too enthused about that.....and a whole lot more, Roger, Roger.....K5NK





# NOVEMBER MINUTES ACARC

The November meeting of the ACARC was called to order at 8:00 PM on Friday, Nov. 4, 1983 with 34 members and 3 guests present.

After Don, K5SJV, gave the CORA report, the club discussed soliciting volunteers for next year's Ham Holiday programs. If anyone knows of someone who would like to give a presentation at Ham Holiday, contact Don, K5SJV.

Now, the contractors were painting the rooms inside the building that day, and the fumes were very strong. That may be why Charlie, W5JGU, revived the same fishing story he started at last month's meeting. At any rate, after all the fishing claims had been made and questioned, Jim, NSBEQ, announced that the Oklahoma City Civil Defense needs volunteers to help check out warning sirens throughout the city.

At 8:35 a motion was made and carried to adjourn and get away from the paint fumes; so we did!

John KA5JCX  
Sec. ACARC

The following is W5JJ's rebuttle to the response to his article concerning Ham Holiday.  
John KA5JCX

It appears that my contributions to the C&E have at least one result: they stir up responses; responses that raise implications of "Do something other than write" or "Put up or shut up."

Not all interested or concerned persons attend CORA meetings. Some live too far away. Some, like myself, have eyesight deficiencies that do not permit driving at night.

But, you say, "Put up or shut up"; so I'll "put up". At least I'll define what I think should be guiding considerations for any assembly of Amateurs of Radio Communication and Technology, Amateurs of Photography, Amateurs of Theatrical Acting (you bet any ham would be person non grata there), or Amateurs of Astrology. In other words, any group of true amateurs.

1. The foremost thought should be the pleasure, comfort, and convenience of the attending amateurs.

2. All activities should be under one roof; weather does not always cooperate as well as it did at the Houston ARRL National Convention.

3. The convention site should be readily accessible; out of town attendees should have no difficulty driving directly to it.

4. Ample free parking should be available; no one enjoys having to ransom his car if he wants to look around a bit.

5. The high-point of the convention should be the banquet. It's speaker should be one of superb ability, either as a public speaker or as an authority in the field of interest shared by the majority of those attending the convention.

6. The lottery should be conducted only at the banquet, just before the featured speaker. The lottery should be short, with no delay between drawings. Lottery awards should be few but of sufficient value to be worth receiving. The most valuable lottery awards should be those for pre-registration, as it is imperative that planners have an accurate estimate of the number of probable attendees. Therefore several pre-registration awards should be planned, each of sufficient value to encourage any and every prospective attendee to pre-register as a gamble even though he may be uncertain of being able to attend. Pre-registration awards should not require that the winner be present but should require that the winner collect the award within a stipulated time; in other words,

the convention officials would not be obligated to ship ant award.

7. Those having the responsibility of making the drawings for the awards should keep constantly in mind the fundamental fact that one cannot mix flat objects by shaking them, either in a box or a cylinder. Witness the "last in first out" sequence of such drawings.

8. If the assembly runs the usual Friday evening, Saturday, Sunday morning sequence, the banquet should be Saturday night. Sunday scheduling should be limited to "special interest groups", groups that would place their specialty at a higher priority than the urge to get home for church or for Sunday dinner.

9. All event time schedules should take into consideration the check-in and check-out regulations of the host hotel.

10. Steer away from lottery drawings at program events. If the program is not of sufficient interest to draw a number of listeners without having to bribe their attendance by the chance of winning in a drawing....then fire your Program Committee!

11. Avoid parallel programming of events of wide appeal. All too often high-interest programs run at the same time. Give serious and questioning thought before making any parallel programming.

12. The attendee should leave "with a good taste in his mouth". Consider the usual programming schedule ending in a prize drawing. The attendees sweat through a tedious, long, drawn-out prize drawing. Perhaps 10% are lucky and get something. They leave happy. The other 90% leave saying "Ah, heck, what a waste of time". Contrast this with the convention that has its culmination with the banquet. After a good meal and a top-rank speaker, each one leaves feeling he's had a wonderful evening, a good convention.

These are my thoughts.

W5JJ

11 November 1983

Joe Harding  
Editor, C&E  
P. O. Box 15013  
Del City OK 73155

Dear Joe:

The last issue of the C & E contained two unjustified attacks on Carl, W5JJ, regarding his previous, legitimate suggestion. If the two men had read Carl's letter correctly they would have found no criticism of themselves.

These "chip-on-shoulder" boys can never approach the level of Carl's half century of dedicated service to Amateur Radio. Rather than invite dissension those men should emulate Carl's advocacy of good grammar and proper operating procedure. Also, an apology would be in order.

Best regards,

Dale N. Diehl, K5WUF

FOR SALE: Atlas 350XL, 350 watt PEP w/manual & mobile mount, excelent condition, \$300. ASTRON 35 amp P/S w/o meters, manual, 4 mos old, \$110. BRIMSTONE 144, 2 meter, 25 watt, w/mobil mount and antenna, excelent condition, \$120. 14 AVG vertical 10-40 meter, w/manual \$20. HUSTLER bumper mount, ant w/40 meter resonator & coax \$10. HEATHKIT KG-62C multimeter w/leads & manual, works, \$7. RG-8/U coax in assorted lengths 25-56 ft w/connectors, \$ 4 to \$7. Walt Harris, Rt 1 Box 1cccc, Lahoma OK 73754 or phone.

GETTING TO KNOW YOUR FELLOW MEMBERS

Have you ever noticed what a big happy family the Autopatch Club is? That's right, at least 17 1/2% of the club is one big happy family. I would venture to say that we have more families of hams than any club in the city, maybe the state and perhaps all over the country. The last roster that I have of the club shows we have 136 total membership. Of these, we have a father and son team, Larry and Chet, a brother team, Jay and Guy, and 10 husband and wife teams, making up a total of 24 out of a total of 136. Anyway you figure it, exactly 17 1/2% of our membership is family. Our husband and wife teams are Ron and Karen, George and Vickie, Buddy and Jenna, Bob and Linda, Bill and Ruth, Marvin and Rosalie, Everett and Jan, Stu and Carol and Mac and Judy. Let's see, who did I leave out? Oh yea, the Presidential family, Reggy and Kathy.

What a group and what interesting material for writing about, especially for the Collector and Emitter's column of "Getting to Know Your Fellow Members". I suppose I have already goofed when the first article in this series was about the one and only Mac MacDonald. I apologize for not including his lovely wife in this feature, but perhaps in time, another article will appear concerning this outstanding couple.

But, on this go round, I thought it would be nice to fill you in on some of the family secrets of Reggy and Kathy Whited, WN5NWX and WB5NDO. What an interesting couple! They are the ambassadors of good will for the city of Moore, which they think is the only place in the world to live. If the truth were known, this is probably the only city in the metropolitan area that would have them.

Let's start with Kathy. What a lovely gal. She is presently beginning her first term as the President of the club. At first, she took on the responsibility as the Vice-president, but after finding out that her primary duty was writing articles for the Collector & Emitter, she had second thoughts about accepting the nomination. Her inability to correctly spell the word "trailer" led to quite a commotion. After hearing that our duly elected president, WD5FKF was seriously thinking about another job in Colorado, she approached him with her hand behind her back and offered Reuben a sizable handout if he would accept the job so she could move up the ladder to the presidency and not have to fool with writing the C & E article. Reuben accepted the bribe and moved on and she moved up.

Kathy should make a good president. The largest task facing her is how to maintain some sort of control over Reggy at the meetings. If she can keep him in place and keep him quiet, no doubt she will be offered a second term as president.

Kathy has a lot of qualifications for the job. She is the present President of the Association for the Advancement of Wives of the Oklahoma City Autopatch Association of America. Her primary goal in this position is for the wives to completely take over control of the club. They have a good start, with two of the four officers now being wives. Let's watch them fellows.

And then there's Reggy. What a character! He is widely known as the clown prince of club meetings. When he sees that the president is bogging down and the meeting is getting a little dull and boring, he is usually able to come up with some wise crack that he thinks is funny and will bring the house down. Usually, what he has to say is only funny to him personally, but at least the president has to keep on his toes.

Not wanting his wife Kathy to stay ahead of him, he recently made an all-out effort in seeking the office of President of CORA. Everytime another nomination was made for an opponent, Reggy would rise up and applaud, daring someone to run against him. After no one would accept a nomination, Reggy was elected by acclamation. The vote was unanimous, with all voting members realizing that since he did most of the talking at the CORA meetings anyway, he might as well be put in the position where he had to do all the talking.

As one can tell from their callsigns, Kathy was first to get interested in amateur radio. Reggy struggled for years in the novice ranks, and finally, after becoming the all-time champion in failing the code test, the FCC grandfathered him to a General Class. The only restriction placed on him was that he had to retain his novice call for the rest of his life.

Reggy and Kathy are quite active in the amateur circle. Their primary love is field day operation. Reggy doesn't do much operating, but is content to sit down in a lounge chair and direct traffic. Kathy is quite an operator though. She is one of the few persons who will tell Mac to shove off and get out of his own trailer so she can operate his radio. Even though most of their operating is done via two-meter mobile, they do have an elaborate set-up at home. As one travels south out of Oklahoma City on Interstate 35 through Moore, you will notice several rather tall towers in the northwest part of Moore. Most people believe these are commercial towers but actually they are phased verticals for all band operations as well as supporting structures for the 160 meter rhombics belonging to the Whiteds.

Reggy and Kathy are usually the first to offer their time and services. Take Reggy for example, any time we need work done at the repeater site, he is always first to volunteer to man the elevator. He won't ride in the elevator, and the reason for this probably goes back to his childhood days while growing up in south Texas. He was always good at climbing up those 80 foot palm trees but he could never figure out how to slide down. He has the same trouble at the tower. He can climb up to the platform, but he can't figure out how to slide down.

I don't know this to be a fact, but rumor has it that Reggy has been seen at the State Fairgrounds on Friday nights participating in the local wrestling matches. I understand he is a real crowd pleaser. He will prance around the ring, teasing and taunting his opponents and in the end after slamming them to the mat several times he always sticks a Chupa-Chup in their mouth while the referee counts to three.

Reggy and Kathy are a fun-loving couple and a joy to be around. Seldom do you see them without smiles on their faces. Get to know them. I'm sure you will enjoy their company. I certainly do and consider them to be a real asset to our club.

K5NK

The November 15, 1983 meeting of the Autopatch Association proved to be quite an evening. First I was appointed and then ratified as the new Vice-President, then Buddy KA5AQY gave a very informative talk on repeater control rollers (this will be covered later in the article). And finally a rousing discussion followed on what direction the club should be heading.

For the most part the discussion covered the repeater controller previously presented. Most everyone felt that the club should have one, but the big question is how to finance it. Approximately Two-Hundred dollars was donated that night, but that fell far short of the needed Fifteen Hundred. How about the rest of the club getting behind this project and supporting it.

The "controller" without the bells and whistles is becoming the "state-of-the-art" in repeaters and the linking possibilities is a feature that can tremendously add to the flexibility of our clubs already good repeater system. Just the basic controller features leaves one feeling that he or she should go back to school just to stay above the latest technology in electronic gadgets.

I guess the amazing part of any club or organization is the apathy shown by at least 50% to 70% of the club membership. A tremendous amount of time and effort is expended by a dozen or so club members to keep the club going year after year after year..... This includes the repeaters, club equipment and anything else that could come to mind.

Come on people, this is your club and only you can change what is or will happen in your club. We need you to come and let your voices be heard. Your absence has been conspicuous for too long. How about starting off the new year with a good old Christmas Dinner at 7:00, December 20, 1983 at the Fire Training Center. Its potluck and little Chuckie (K5NK) would sure appreciate another White Elephant. So come on out and have a good time, eat to much, and show that you really do care about YOUR club.

WD5CSM

# Salem

If you don't own a satellite receiver (TVRO), well, you might think twice about buying one. Not that you won't be able to use it, the question is really one of direction for the Broadcast Satellite business and a possibility of technical obsolescence.

Some time ago, the FCC has authorized the launching of 19 domestic communications satellites and reduced orbital spacing between satellites from three degrees to two degrees. The reduced spacing will have an immediate effect in the 12-14 Ghz Ku Satellite band where the Commission elected that it take place immediately. This is no big deal right now since there are only three Ku Band satellites presently in orbit although there have been numerous other Ku assignments. For the C Band systems (4-6 Ghz) the phase in will be implemented slowly to give those existing systems an opportunity to upgrade to accommodate what will surely be a steadily decreasing ability to use their existing systems.

This all started in October of 1981 when the FCC first proposed to reduce the spacing of satellites in the Fixed Satellite Service (nonbroadcasting satellites as opposed to the Direct Broad Service or DBS recently approved by the Commission) to 2 degrees from 4 degrees. The idea was to ease what would be an expected scarcity of orbital slots by the late 1980's. There are only two orbital segments that as a practical matter are useful to the U.S. Domestic satellite business. These two segments are 70 to 104 degrees longitude and 117 to 143 degrees longitude. The segment from 104 to 117 degrees is being held for Canadian satellites. For four degrees spacing, the two segments provide approximately 15 slots, not enough for anticipated growth of satellite services in the next 5 to 6 years. The Commission had authorized the construction of four new satellites for which there were no orbital slots then available. One of the first considerations was a reduction of the orbital spacing to 3 degrees which would have just barely allowed these four satellites to squeeze in.

There would have been no problem except that many new cable systems and, of course, the growing home TVRO business had stopped with small dishes in the 10 foot or 3 meter range. The reason? Quite simply, cost and that was a crucial factor after experimentation by Bob Cooper W5KHT and others had proved the feasibility of the small antenna TVRO. Prior to that time, the typical earth station costs upwards of \$100,000.00 or more and there were noncommercial users who were actually paying that much. Bob experimented with dishes as small as 6 foot and found that fairly decent pictures could be generated if you used high dollar low noise preamps (LNA's or Low Noise Amplifiers). These amplifiers were so good that they didn't measure their noise figure in db's, but rather in degrees Kelvin. I remember looking at a LNA with a noise temperature of 75 degrees Kelvin and as low as this was, it had an equally high price tag of over \$2,000.00. Eventually, 10 foot dishes and 125 degree LNA's became very commonplace and in fact, most satellite systems for home use combine these components, more or less. The only problem is that 10 foot dishes are not really enough beam definition to pick out satellites in the sky at 2 or even 3 degrees. The smaller dishes were definitely cheaper but do not have as much gain.

The gain figure at 4.0 Ghz (the satellite downlink frequency) for the typical dishes are listed below:

3.00 meters diameter	39.5 db
3.66 meters diameter	41.0 db
5.00 meters diameter	44.0 db
7.00 meters diameter	46.7 db
10.0 meters diameter	50.0 db

Obviously, a 10 meter diameter antenna can go a long way toward making up the 196 db path loss from the earth station to the satellite 22,300 miles out in geostationary orbit in space. But the point of Coop's experiments was that you could do the same thing with almost 10 db less gain than you would get in a 10 meter dish. And 3 meter dishes were a whole lot cheaper to make and sell than 10 meter dishes. But though the 3 meter dishes were cheaper, their success with the TVRO and small cable operator was predicated on 4 degree satellite spacing which kept harmful interference out of the ground station. Now that the Commission has decided to reduce satellite orbit spacing to 2 degrees, the assumption which worked for 4 degrees may not be valid any longer.

At 2 degrees, many of the TVRO systems may find it difficult, but perhaps not impossible, to operate because of the possibility of cosatellite interference. It is no secret that existing satellite carriers objected to the proposed change. This is also no surprise since nobody was interested in having the commission drop a whole new group of competitors in your back yard, space wise. Also many of the earth terminal manufacturers also objected, though their reasons might have been a bit more nebulous. I can't imagine a manufacturer would resist an opportunity to sell additional equipment (as well as being more expensive) to existing customers and new equipment to new customers. They may have felt that the additional expense in antennas required by the closer spacing would have priced the equipment out of the market (especially now that the going price for a system is less than \$2,000.00) It didn't make any difference anyway, even in the face of strong objections from the industry, the FCC determined in May to immediately implement the changes in the Ku band and phase in the closer orbital spacing for C Band.

Existing C Band TVRO systems will have to be reevaluated for interference potential from the closer spacing. Consumers will need to be especially wary as the price drops on the home TVRO systems as manufacturers try to get rid of existing inventory dishes. Many of the 3 meter receiving antennas may require performance upgrading (perhaps feed system retrofitting) or perhaps even replacement with a larger 4.5 meter dish before orbital spacing is implemented. The Commission based its plans on worse case interference levels and also assumed improved earth terminal capability, so there is no doubt that current 10 foot or 3 meter diameter users will be at risk.

There are a few other techniques that can be used short of earth station upgrade to minimize interference. For example, many of the satellites are 24 channel jobs with 12 channels horizontally polarized and 12 channels vertically polarized on the same satellite. Every other channel is an opposite polarization from the adjacent channel. By this method, the satellite users can take advantage of the additional 20-30 db of isolation that results from cross-polarization. By this method, they can space the channels closer together with less likelihood of adjacent channel interference. The channels are also offset from each other. Most satellites also use wideband FM modulation

for each of the TV channels so that they can also take advantage of the "capture FM effect" to help eliminate interference.

It is expected that frequency coordination from the satellite transponders in the form of requiring adjacent satellite owners to put channels on opposite polarization will substantially help. For example, a satellite has a particular channel horizontally polarized. By frequency and polarization coordination, each satellite 2 degrees away on either side will have the same channel vertically polarized. This cross-polarization discrimination of the receiving antenna will add anywhere from 6 to 10 db of isolation to the normal off axis discrimination provided by the main beam of the antenna receive pattern. Thus not only will alternate channels on each separate satellite be cross-polarized, each channel will also be cross-polarized from each adjacent channel. This 6 to 10 db of isolation would be the equivalent of changing from a 3 meter dish to a 7 or even 10 meter dish.

The Commission is also expecting other methods to aid in minimizing the problems of adjacent satellite interference such as modulation techniques of overdeviation of TV signal RF carriers. The Commission also expects the satellite carriers to juggle around the users on the various transponders to minimize the probability of high level carriers or wide spectrum carriers causing interference to low level carriers.

Assuming that the various techniques suggested do not solve the problem, the receive station can always replace the small dish with a larger dish to narrow the beamwidth. Replacing a 3 meter antenna with a larger antenna will not always solve the problem if one of the so-called "multibeam" antennas is used. These type of antennas are intended to allow reception of more than one satellite without repositioning the antenna between them by using a multifeed array. These satellite receiving antennas may not have sufficient signal to noise ratios to distinguish between satellites spaced 2 degrees apart.

The C band systems are the only ones with a real problem with the reduced orbital spacing because the Ku band systems are simply not very well developed at this time. Besides the DBS systems slated for use in the Ku Band will have high power transponders and will be on the order of 200 watts or so from the 8-10 watts currently in use in the C band system. With the additional power and higher frequency, Ku receive only stations will be considerably cheaper to manufacture. The feasibility of the DBS system was a direct outgrowth of a joint U. S. -Canadian experimental satellite, the Communications Technology Satellite (CTS, which was later to be renamed Hermes). Using power along the order of 200 watts or so and a directional beam, the satellite was able to achieve downlink signal levels in the 11.7 to 12.2 Ghz band which could be received by small antennas along the order of 1 meter or two, which was an indication of the feasibility of home direct from satellite broadcasts. Since the inauguration of the DBS (Direct Broadcast Satellite) Service, the Commission has authorized the construction of eight satellites with expected operation dates to be somewhere between 1985 and 1986. These DBS stations will each have an expected 12 channels per satellite and will operate in the 12.2 to 12.7 Ghz band, tentatively now the broadcast satellite band. The higher power of the Ku Band DBS satellites will mean also more beamwidth problems, but it is expected that DBS spacing will be different from other Ku Band satellites, somewhere on the order of 15 to 20 degrees. This is possible because

the DBS system will operate on different frequencies from the other Ku systems.

Satellite programming has exploded with a lot of newcomers and some old standards all switching to the birds. There are as many as 160 programs now available on 113 transponders over 14 satellites. A lot of this stuff is still catering to the cable tv market, but more and more is oriented toward the use of the commercial broadcaster. Part of the reason that many of the commercial radio networks such as Mutual, CBS, and RKO are on or have been on the satellites is that the phone companies simply can't keep up with all the broadcast demands. The growth of independent stations in the various markets is also a factor as they have started increasing the workload of the phone company for high quality lines. Most of the radio networks are expected to completely switch over to satellites for many of their distributions and it is expected that all three television networks will begin distribution to their network affiliates via satellite soon. In fact, NBC is expected to begin satellite distribution to 24 affiliates on January 2, 1984 and 1984 and expand to a full satellite system by September of the same year. This is expected to begin in the Ku Band on a system of Satellite Business Systems and convert over to the Americom satellites by 1985. The selection of the Ku Band place NBC in a different posture from both ABC and CBS who are locking in on C Band systems. Ku is less susceptible to terrestrial interference because of the absence of other services. There is greater problem from rain attenuation, but it is not expected to be any more of a problem than normal landline outages.

How many satellites are expected in the new DBS service? A bunch. On the next page is a short table of current applicants for DBS with over 26 satellites proposed in the air and 12 on the ground as spares. The uses are proposed from anywhere from program (including one HDTV, high definition Television from CBS) to Common carriers and lease channels. It is expected that each of the satellites will have 200 watt Ku band transmitters with each of the applicants offering from 2 to 3 channels or services each. All have proposed to offer multichannel service which will include both free channels and premium channels including movies, sports, news and stereo audio. Receiving stations should be about \$500-\$600 apiece plus any additional monthly charges for premium service. There is a strong likelihood that some of them might also offer teletext or videotext information services.

In Table 1 is shown the current assigned orbital positions for various satellites either now in orbit or proposed. This chart is taken from the August 1983 issue of Broadcast Engineering. It can be seen that the Commission has not followed exactly 2 degrees between each satellite in the same service, as for example, between 137 and 134 degrees West longitude. Some spacing is also 2.5 degrees as shown at 76 and 78.5 degrees. Regardless, it can be easily seen that the skies are becoming pretty crowded. Of course, not all of this is broadcast oriented or even intended for cable operators. Much of space is still allocated to telephone and digital data transmission. The Commission has followed its basic policy of deregulation and while it has prescribed some standards in allocation and programming, it is expected that they will let the marketplace determine much of what happens in the new satellite broadcast industry. To some extent, and if you will pardon the expression, the sky is the limit.

Micheal Salem N5MS

Table 1. Satellite orbital positions		
Orbital positions (West Longitude)	User	Band(s)
143°	SATCOM V	C
141°	Unassigned	C
139°	SATCOM I-R	C
137°	Unassigned	C
134°	GALAXY I	C
132°	Rainbow	Ku
131°	SATCOM III-R	C
130°	ABCI	Ku
128°	American Satellite	C, Ku
126°	RCA	Ku
125°	TELSTAR/COMSTAR	C
124°	SBS	Ku
122°	SPACENET I	C, Ku
120°	USSSI	Ku
119.5°	WESTAR V	C
117.5°	Canada	Ku
116.5°	Mexico	C, Ku
113.5°	Mexico	C, Ku
112.5°	Canada	Ku
111.5°	Canada	C
110°	Canada	Ku
108°	Canada	C
107.5°	Canada	Ku
105°	GSTAR	Ku
104.5°	Canada	C
103°	GSTAR	Ku
101°	Unassigned	C, Ku
99°	SBS	Ku
98.5°	WESTAR IV	C
97°	SBS	Ku
96°	TELSTAR	C
95°	SBS	Ku
93.5°	GALAXY III	C
93°	Unassigned	Ku
91°	SPACENET III	C, Ku
89°	SBS	Ku
88.5°	TELSTAR	C
87°	RCA	Ku
86°	WESTAR	C
85°	USSSI	Ku
83.5°	SATCOM IV	C
83°	ABCI	Ku
81°	American Satellite	C, Ku
79°	Rainbow	Ku
78.5°	WESTAR	C
77°	RCA	Ku
76°	TELSTAR	C
75°	Unassigned	Ku
74°	GALAXY II	C
73°	Unassigned	Ku
72°	SATCOM	C
71°	Unassigned	Ku
69°	SPACENET II	C, Ku
67°	SATCOM	C

Editor's note:  
In the Band(s) column, C refers to C-Band spectra, with 4GHz as downlink and 6GHz as uplink frequencies. Ku refers to Ku Band, or 12GHz downlink and 14GHz uplink frequencies.

Table 1. Current FCC Satellite orbital position allocations. Two basic segments are of primary use to users in the United States, the segments from 70 to 104 degrees West Longitude and 117 to 143 West Longitude. The segment from 104 to 117 degrees is being held for Canadian and some Mexican satellites. Canada requires the middle segments because of their higher latitude for receiving stations which require lower angles to "look" toward the equator. Orbital spacing is shown after the recent FCC action decreasing orbital spacing from 4 degrees between adjacent satellites to 2 degrees. There is not a complete uniformity of 2 degree spacing as can be seen from the table with some spacing at 3 and 2.5 degrees. The Commission action decreasing the orbital spacing was intended to provide for the increase in expected demand for satellite services between now and 1990. Surely there must be somewhere where amateurs could sneak in a geostationary satellite for their use of the translator type. How about it Amsat? Maybe we can get NASA to let it go up as a Shuttle payload.

Reduced orbital spacing is expected to have consequences on current users of small diameter antenna earth stations as increased interference from adjacent channel satellites is expected. Various methods to minimize interference may be required including increasing the size of the earth station terminal antenna.

Applicants for DBS Satellite Service					
Name	Parent Company	# Satellites	# Channels	Primary Business	Remarks
CBS	CBS, Inc.	4 (2 Spare)	3	Broadcast Network	HDTV/Programmer
DBSC	Satellite Systems Engineering, Inc.	3 (1 Spare)	6	Consultant	Common Carrier
Focus	Focus Broadcasting Company	1 (Western Union)	1	Subscription TV	Lease Channel
Graphic Scanning	Graphic Scanning Corp.	2 (1 Spare)	4	Radio Common Carrier	Programmer
Satellite Television Corp.	Comsat	4 (2 Spare)	3	Satellite Service	Programmer
RCA American	RCA	4 (2 Spare)	6	Electronics, Broadcasting (NBC)	Common Carrier
United States Satellite Broadcasting	Hubbard Broadcasting	2 (1 Spare)	3	Broadcasting Stations	Programmer
Western Union	Western Union	4 (2 Spare)	4	Common Carrier	Common Carrier
Video Satellite System	Video Satellite Systems	2 (1 Spare)	2	Newly Formed	Carrier for Dominion Sat. A Related Company

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Current Applicants for DBS Satellite Service. It is expected that each may agree to provide anywhere from 2 to 3 different services of a commercial nature to the public in a direct broadcast format. Some channels may be free while others will be on a pay as you view or flat fee basis. DBS Service is expected to be implemented within the next several years.

## SQUELCH TALES FROM THE BIG KAHUNA

The behemoth lives in Norman. So far, the Motorola repeater of the 140 watt persuasion has managed to survive almost three months. Not that it hasn't had a couple of infant mortality incidents, mind you, but once those were straightened out, the 28/88 repeater has had a very good survivability rate. Now, just like the song goes, everything is up to date in Kahuna land.

It has been a very enlightening experience to have a repeater that can talk almost as far as it can hear and under some circumstances just a little further. For a long time, I ran the 88 repeater as your basic local rebelcher, covering enough of Cleveland County to make it worthwhile to use. There were really no designs on Kahuna status. Several reasons dictated this status. First, one of the ways to keep squirrels off the system was to eliminate the possibility that they would hear it. While I had spent a lot of time on control circuitry designed to desquirrel the system, persistent people might, after a time, make an inroad. Not that it would be a tragedy if somebody figured out how to turn off or on the patch, it was the incidence of when such circumstances would occur. I remember that a couple of long distance telephone calls (not a long way away, just to Wayne, Oklahoma) appeared on the telephone bill before I was able to get the toll defeat circuitry up. Now it wasn't the problem of paying for a couple of 25 cent telephone calls that made it a problem, it was the fact that somebody thought that they could do it and get away with it. Kerchunkers are a problem of minor direction, but they definitely are an annoyance. It is amazing to listen to the kerchunkers key the repeater for minutes on end, as if the sound of the courtesy tone was some Beethoven symphony and they were Leonard Bernstein. Not really a lot that I would care to do about that. After all, they are the one who is breaking the law. My repeater identifies quite readily in both voice or CW, as the appropriate occasion.

I finally decided to put the big motorola up after obtaining a controller for the repeater that could handle the hostile environment of a Big Kahuna (That's capital "B" and capital "K", thank you). The ACC (Advanced Computer Controls) RC-850 grew up in the hostile environment of South California where I am sure that nothing would make it blush. It is very handy for that kind of thing. It offers so many features and gadgets that it can be tempting for a certain level of the population, but for the most part, it seems that users, both legal and illegal, regard it with a sort of benign interest. After it was installed in August, there were an abnormal number of unidentified transmissions with the usual touchtones. I actually think that these were caused by a relatively small group. And I think that that group gets a little smaller after the Controller, like everything else, loses its newness. The idea, after all the initial folderal, is to make the controller transparent to the user. That is why I have cut down on the voice id's and have even kept some functions turned off. I expect to reduce now existing voice id's even more. I think that even the regular users can get a little tired of them.

I am very gratified that the coverage area of the system has greatly expanded. Running less than 25 watts from about 100 foot less height probably meant that many users were probably hitting the system, but not hearing it come back to them. Now that we have hoisted the antenna an additional 100 feet and added about 5 times the previous power, there really is no problem hearing the repeater throughout its entire service area. This, most

most importantly, means that the repeater is available for use for both the casual and emergency user throughout that area. I have had several people check in with emergencies ranging from auto accidents to just simple flat tires from throughout the area. This has included several along the north side of Oklahoma City, a previously uncharted region as far as coverage. The autodialer makes dialing emergency numbers a snap, with only a couple of digits to remember instead of a whole string. We have police, Highway patrol (the voice identifier says "Smoke E"), OU Police, Fire, OKC Police and several others. For those in a hurry to talk to the repeater operator, both his home and office number are part of the abbreviated autodialer. Supporting users have autodial slots assigned to their use and containing their home numbers. Not only can they dial home, but other users can dial home numbers simply by remembering their assigned numbers. It is really a convenient device.

Work is progressing slowly, but surely on the 10 meter link for the appropriately licensed user. WA5TOO and I spent some time getting a 10 meter trombone style antenna up on the top of the building and I have worked a little more on my 10 M Moxy to get it up and running on 29.6 Mhz. This project took some shortcuts for awhile as I was trying to catch up on a bunch of office projects, but I expect to get back to it sometime soon.

KA5OHU and WA5TOO have been working on getting a windspeed and direction indicator as well as an outside air temperature sensor outside. Hope that these will be operational. About the only fly in the ointment has been a recent effort to lower what looked and sounded like desense. WA5TOO, N5AMV and myself were working on the Kahuna one saturday trying to clean up its act when it took a nose dive for the basement. Apparently, one of my spare final amplifiers had developed an intermittent short and took the screen resistor to never never land. I was on my way out of town at the time and came back Monday morning and put the exciter on the air for awhile and took the PA down for repair. That 8 watts out of the exciter worked pretty well for a day or two while I rewired the screen resistor and plugged in a new tube. We took it back up for awhile and retuned it just by the book and so far it has not varied off of 90 watts for a long time. Dean tells me that the TSY style repeater base station can go along time before needing any help. Sure hope so, I still need to pay for the conduction cooled final amplifier I replaced.

Maybe next month, if time and space permits, I might be able to drum up a sizzling exclusive C & E pictorial of the Big Kahuna. Just depends if I can get the Brownie out of the hock shop and a roll of film. Or better yet, I might convince WD5HPU or a similiarly talented individual to help. Just have to see before I make any promises.

It has been gratifying that all the users have been patient and understanding while some of these bugs have worked their way to the surface. But then again, that is really the way most amateurs are. What we do is not really "professional" in status, but there are many operators who have a professional attitude. Makes the group a little more fun.

Micheal Salem N5MS



# kay

COUNTY ARC

The December meeting of the Kay County Amateur Radio Club will be on the 3rd Tuesday, Dec. 20, instead of the 3rd Thursday and will be at the Rusty Nail Steak House here in Ponca City starting at 6:30 pm.

Just thought that I would mention the December meeting first off so that everyone will see it. Also the correct date is Dec. 20 instead of the date given in last month's article.

The November meeting had the following hams present: C.L.-W5ZMM, Vern-N5ANV, Dave-WN5LUI, Glen-KA5PUB, Marsh-WA5UBO, Sam-WD5BXI (congrates to Sam and his wife on his 50th wedding anniversary!), Gene-WA5MUB, Dr. Paul-KA5PYG, and myself. We also welcome a new member, Gordon-N5ABT, to the club.

Vern brought several QSL cards to the club meeting that he received from several Minnesota contacts. Now I know this doesn't seem news worthy, but these contacts were on 2 meters from his house! The contacts were made on Oct. 24, 1983 on 147.03, first on 3 linked up repeaters and then on simplex (25 watts).

Thanks to Marsh for presiding over the last meeting. Delbert was unable to attend due to working late.

The St. Joseph Medical Center of Ponca City will have an emergency exercise this month and if any hams are available, they may be able to help out. I think the date will be Dec. 13. More information will be available on the Monday night net.

Hopefully by the time this article is out, the Ponca City repeater will have a news service for amateur radio operators, the Westlink news service. The news will be provided over the W5HZZ repeater after the regular Monday night net.

There is a very good possibility of a 10 meter repeater in Ponca City. There are several local hams who want to cross-link it to the 2 meter repeater. It will probably be a split site configuration and they hope to have it on the air by next summer. For further information, contact Dave-WN5LUI or Vern-N5ANV.

Tom-N5ZR put his time off during Thanksgiving to good use. Along with some help from Tony-WD5EAA, Delbert-WB5YRN, and myself, he put up a Mosley Tri-Bander. Naturally the wind was blowing and the temperature was a little chilly, but at least it wasn't snowing. It always seems that the best performing antennas are always put up in winter so maybe.....

Just as a reminder, it might not be to wise to discuss travel or vacation plans over the air, especially over the local repeater. There may be someone listening that may invite themselves over to your house while you're gone!

That's about it for this month, so until next year....

73's  
Rick-WD4CEP

PS-Merry Christmas to all

WANTED: pair 3-500Z, also 572B's (new only).  
Also, B&W 850 Tank Assembly.

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"HEY, MAYBE WE COULD LINK UP WITH THE FLORISSY COMPUTER AND GET ALL THE HOME ADDRESSES OF THEIR DIRECTORS!"

## EDMOND AMATEUR RADIO SOCIETY

147.785/147.136

The November EARS meeting began solemnly as we paid our last respects to our friend, Paul Loafman, K5BPY. Paul was nearly 84 years old when he died. He was an active amateur, and longtime EARS member. We will all miss him.

In the business part of the meeting, Clarence, KB5RR read the minutes and treasurers report. Then Linda WD0FTM reported on the CORA meeting, and the club voted to work the registration table at the next Ham Holiday. Bill KC5GN reported the results of the club officers nominating committee. Nominations were as follows:

John Callison KB0OU - President  
John Keeling WA5ZGM - Vice President  
Bill Wright KC5GN - Secretary/Treasurer

Further nominations and voting will be at the January club meeting.

The business meeting was short so that David VanNostrand, Edmond C.D. Director could conduct a tour of the Edmond EOC. The building has its own water supply and air purification system, but I was impressed most by the stand-by generator.

The next meeting will be a Christmas Dinner meeting at the house of Bill Wright, KC5GN on December 16 at 6:30 pm. Please RSVP and find out what you should bring by calling 341-6076.

See you there,

John WA5ZGM

### ☼☼ HAM HORRORSCOPE ☼☼

☼ Sagittarius Nov. 22-Dec. 21 You think you are a born leader. Others think you are pushy. You are arrogant and a bully. That's why you win contests.

## HAMONICS

de WB6QEZ



From The Call Letter (Ponca CA ARS)

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
DECEMBER				EDMOND Club		COCO
				1	2	3
		MORI Great Plains	ARDMORE	ALTUS AREA	SCARS DINER	CIMARRON
4	5	6	7	8	9	10
Wheatstraw	OK-DX	76'ers SHAWNEE			EARS	VHF Club
11	12	13	14	15	16	17
	A.R.E.S.	AUTOPATCH KAY County				
18	19	20	21	22	23	24
	EDIT CENTRAL COLLECTOR - RADIO AMATEUR EMITTER	SHAWNEE				
25	26	27	28	29	30	31



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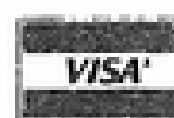
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