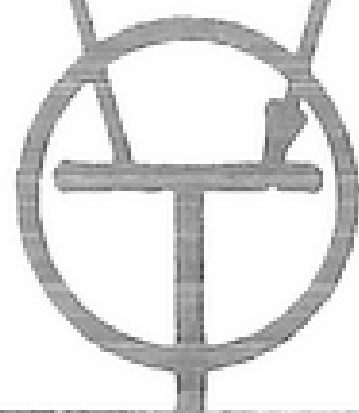


Central Oklahoma Radio Amateurs

COLLECTOR AND EMITTER

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AN INFORMATIVE MAGAZINE
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FOR OKLAHOMA RADIO
AMATEURS
AND ANYONE INTERESTED IN
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Volume 7

MARCH 1981

Number 74



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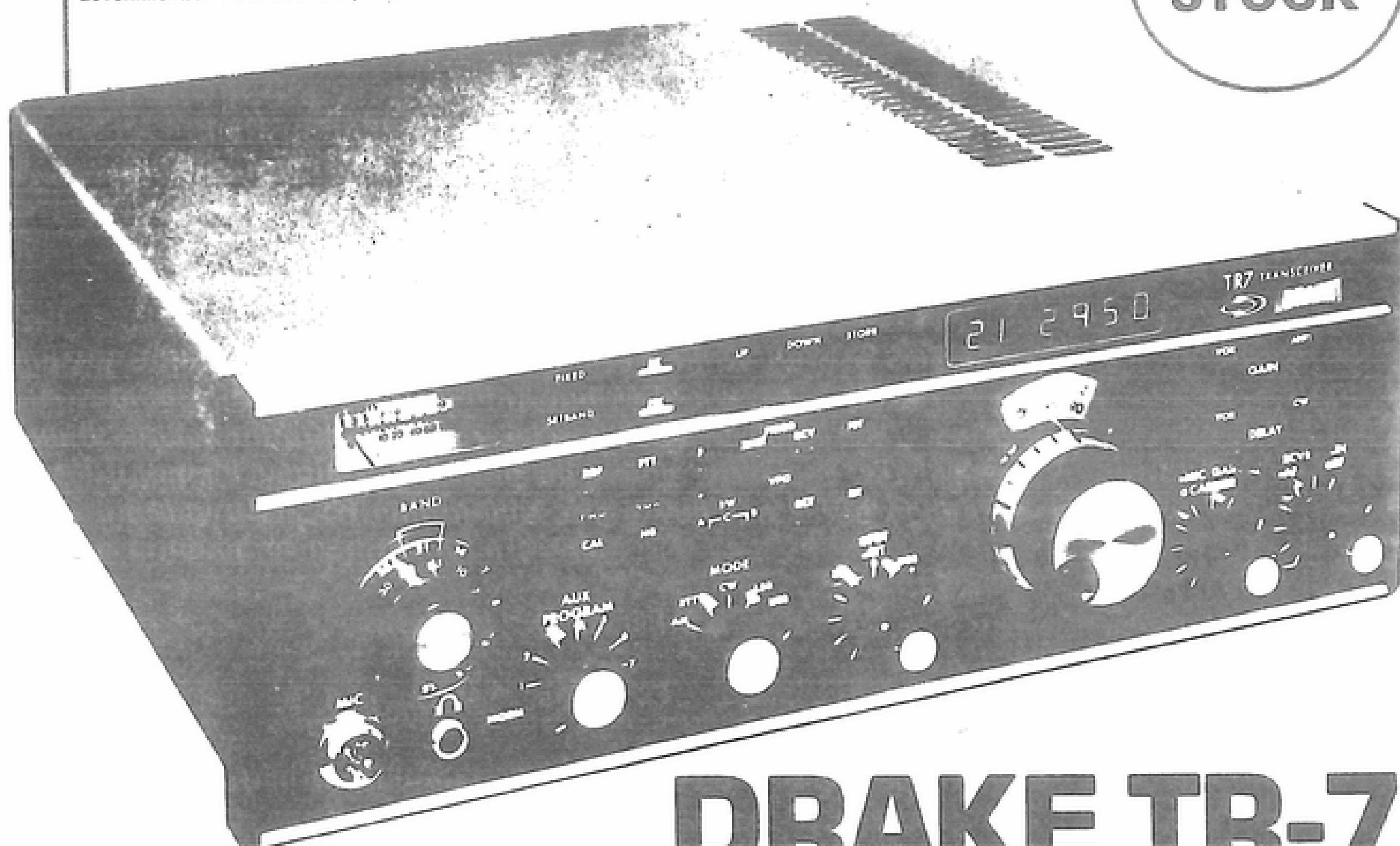
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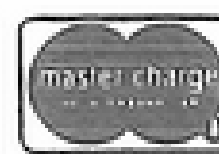
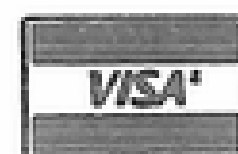
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Central Oklahoma Radio Amateurs, Inc. (CORA) is a not-for-profit association of radio amateurs, founded for the promotion of interest in amateur radio communication and experimentation, for the advancement of the radio art and of the public welfare and operates to enhance the cooperation of member clubs in sponsoring activities of mutual interest to the clubs and all radio amateurs.

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CLUBS PARTICIPATING IN CORA

1 AERONAUTICAL CENTER ARC MEETS: 8:00 PM First Friday each month Flight Standards Bldg. FAA Aero Center Pr WA5CJG Bob Pace 376-3569 VP K5KDR Bill Oliver 329-6333 Se WB5NSV Bob Graham 677-8685 Tr WB5AAY Larry Buga 789-4180 EDITOR: Bob Graham 677-8685	2 OKLAHOMA CENTRAL VHF CLUB MEETS: 8:00 PM Third Friday each month American Red Cross, 10th & Hudson OKC Pr WD5IRB Ralph Barton 521-8330 VP WA5FMD Bill Holand 354-5018 Se K5JJB Joe Buswell 732-0676 Tr W5KE Ellard Foster 789-6702 EDITOR: Joe Buswell 732-0676	3 MID-OKLAHOMA REPEATER, Inc. MEETS: 8:00 PM First Tuesday of month Okla City EOC, 4600 N Eastern Pr KA5CKW Fred Taylor 528-1537 VP W5PDH Frank Arnold 737-1582 Se KA5FED Susie Atkinson 842-8014 Tr K5K02 Sid Gerber 737-1050 EDITOR: Susie Atkinson 842-8014 Dues: Sid Gerber, 829 Bouse, HMC 73110
4 OKLA CITY AUTOPATCH ASSOCIATION MEETS: 7:30 PM Third Tuesday of month Okla Military Academy, 36th & Grand Pr K5NK Chuck Wilhite 721-4926 VP N5IH Henry Isreal 722-3848 Se WD5KFT Clara Storm 495-6228 Tr WB5QPI Zach Zachry 732-2888 EDITOR: Henry Isreal 722-3848	5 OKLAHOMA UNIVERSITY ARC MEETS: 8:00 PM (Sep-May) 2nd Tuesday Carson Engineering Center Pr WB5RQB Lee Hardy 325-4545 VP KA5C01 Peter Richeson 329-3217 S/T Peter Richeson EDITOR: Chris Royce 364-3848	6 ALTUS AREA AMATEUR RADIO ASSOC. MEETS: 7:30 PM 2nd Thursday each month North Main Fire Station (CD) Altus Pr WB5MJS Charles Smith 477-1098 S/T KB5FW Dennis Bonewitz 477-0194 EDITOR: Mike Schenkle 482-1797
7 BICENTENIAL ARC (THE 76'ERS) MEETS: 7:00 PM 2nd Tuesday each month Air National Guard, Will Rogers Apt. Pr KB5BS Bill Skipper 495-6946 VP W5AUM Jerry Sproul 354-2061 Se W5BEQ Jim Buswell 236-0368 Tr WD5BMP Joe Couch (Guthrie) 282-4353 EDITOR: Coy Day 691-1194	9 WHEATSTRAW AMATEUR RADIO CLUB MEETS: 2:30 PM First Sunday of month Location Varies. See club section Pr W5Z2 Roy Barnes VP WD5GLD Dick S/T WA5PFK Ralph Wilder 623-5421 EDITOR: Ted Vanlangenham 262-1675	10 CHOCTAW AMATEUR RADIO CLUB MEETS: 7:00 PM 2nd Monday, Woods Comm- unity Baptist Church, SE 29 & Choctaw Pr WD5EVP Bob Allen VP AB5H Frank Carter 391-8297 Tr KA5ALO Richard Edwards 390-8297 Se W5BEP Syrena Standlee 279-3975 EDITOR: Syrena Standlee 279-3975
11 EDMOND AMATEUR RADIO SOCIETY MEETS: 2:00 PM 3rd Sunday, Room 205 Science Bldg. Central State Univ. Pr KB5RR Clarence Dollmeyer 341-7163 VP WD5DGC Don Brown 737-6141 S/T KB5QC Roger Harmon 348-1230 Ad W5BEQ Jim Buswell 236-0368 EC WD5HXX Ken Stepp 341-4878 EDITOR: Clarence Dollmeyer 341-7163	12 SHAWNEE AMATEUR RADIO CLUB MEETS: 8:00 PM 2nd & 4th Tuesday Shawnee City Hall - EOC Pr K5LF2 Bob Almand 598-5148 VP KA5FIT Walter Fultz 598-3984 S/T KA5PBC Jim Sullivan 273-3843 EDITOR: Jay Tingler 273-3033	13 KAY COUNTY AMATEUR RADIO CLUB MEETS: 7:30 PM 3rd Thursday of month Security Bank Basement, Ponca City Pr WB5NBK Steve Scott 765-7408 VP WB5SAG Grady Skillern 765-3411 S/T Cosby Clarke 765-3705 EDITOR: Steve Scott 765-7408
CENTRAL OKLAHOMA RADIO AMATEURS CORA meets the fourth Tuesday of each month, 7:30 P.M. at American Red Cross Use back door, 10th & Hudson, Oklahoma City ALL CLUBS should send their three representatives to EVERY meeting! EVERYONE WELCOME	15 SOUTH CANADIAN AMATEUR RADIO SOCIETY MEETS: 9:30 AM 3rd Saturday each month Red Cross Bldg. North Campus Norman Pr KB5EK Wade Anderson 794-5144 VP KA5GFL Charles Warner 364-9561 Se WA5RPP Sam Barrett 321-6297 Tr WA5MLT H. O. Townsend 329-4426 EDITOR: Jack Bickham 329-1311	16 EDMOND AMATEUR RADIO CLUB MEETS: 7:45 PM First Monday of month See club section for location. Pr WB5UIY Stan Van Hout VP WB5ISO Wendall Cochran 943-4308 S/T WA5BQX Bob Shaw 341-4874 EDITOR: Stan Van Hout
17 TRI-CITY AMATEUR RADIO CLUB MEETS: 7:30 PM First Monday of month. Location varies, see club section. Pr WB5TFX Ben Gard 379-3112 VP WB5VPM Carl Cash 257-2243 S/T KA5FD Nancy Haydon 379-6448	18 GREAT PLAINS AMATEUR RADIO CLUB MEETS: 7:30 PM 1st Tuesday each month Woodward Court House basement. Pr WB5OVT Rod Ford VP WD5DPH Bill Reid Se WD5DFG Donna Reid Tr KA5FKY Gerald Bowman	19 SOUTHEAST OKLA AMATEUR RADIO ASSN. Pr WB5TTV Ron Hanson 326-5418 VP WB5ULI George Weldon 326-5672 S/T WD5FUE Orville Kaley 326-3640



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IND-OKLAHOMA REPEATER, INC.



EDITOR: Susie Atkinson 842-8014

Hi Everyone!

I apologize for my delay in submitting articles for C&E these last two months, so without further delay, I'll try to give you some information of what has been going on.

***** In January, we had our usual monthly meeting at EOC there were 47 people present (members and guests) and three new members joined that night; and one family (all of them are amateurs) They are:

Charles Kauffer - K5RRQ
John P. Stevens - WB5BAE
Ken Roberson - K5DNL
"THE WITTS"
Sidney, Jr. - K5MKH
Mary - W5WRB
Sidney, III - WB5NRO
Lawrence Allen - WB5LBU

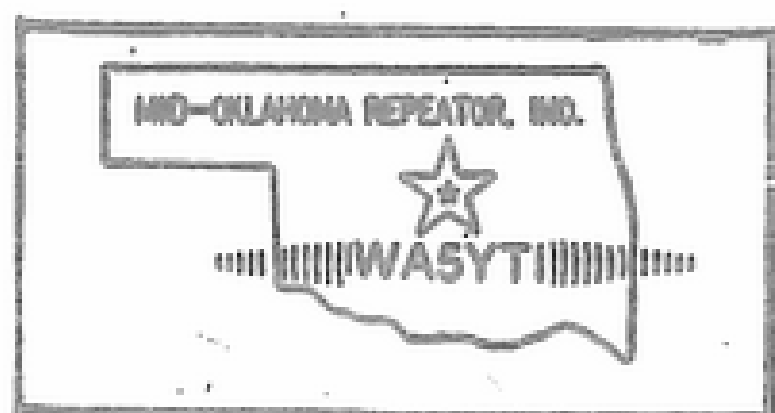
The rest of the business was performed as usual -- our program was presented by Mr. Berry from Kerr-McGee on "Energy" how to save \$\$\$ -- how oil is produced, etc. It was very informative.

Beginning January 27, I (with several other hams) attended some sessions about "types of disaster" and different ways some agencies, like the Fire Dept., Civil Defense and the others, operate. We were also informed how we (the ham operators) can assist in emergencies. So far we have been to Red Cross (conducted by Jack Muse), State Civil Defense (conducted by Robbie Robinson & Ken Fields), O. C. Fire Dept. (conducted by John Lovely AND Jerry Rader) and County Civil Defense (conducted by Larry Watson and Charlie Brice). I think that all of these men should be commended for very interesting and informative programs. Thanks for their time and great efforts.

February meeting was held on the 3rd at EOC with 58 members and guests present. We had a very descriptive program on the "New concepts of Communication" by Carol from the S. W. Bell Telephone Co. Did you know someday you will be able to tell who is calling you before picking up the receiver ??? It's a device called "Invader of Privacy" -- it will display an LED read-out of the incoming number, so then, you can recognize that "persistent" salesman and the rest is left to you, whether or not you want to talk to him -- Hi! Also she turned back the hands of time to demonstrate how the first telephone was invented and its operations, and there was much more.

There have been activities for the month of February, for more information be sure to listen to one of our repeaters - 07/67 34/94, etc. or refer to your current issue of C&F (calendar on the back page) I am planning on participating in more of them, so hope to see you.

KA5FED



WE HAD AN ESPECIALLY GOOD MEETING THIS MONTH. THE CROWD OVERFLOWED IN THE ALTERNATE ROOM SET UP FOR US BY THE FINE PEOPLE AT THE OKLA. CITY EOC AT NW 46 AND EASTERN. THE REGULAR ROOM WAS ALL SET UP FOR A CITY DRIVER TRAINING COURSE IN PROGRESS DURING THE DAY.

YOUR PREZ PULLED A BONER, YEH AGAIN, AS A RESULT I SUSTAINED SEVERAL MINOR BUMPS AND LACERATIONS, SPIRITUALLY IF NOT PHYSICALLY. I OMITTED CALLING ON SUSIE, KA5FED FOR THE READING OF THE MINUTES. SORRY ABOUT THAT, SUSIE ---- WON'T HAPPEN AGAIN.

THE NEW CORA REPRESENTATIVES WERE INTRODUCED, K5YAQ CLARENCE, AND KA5JUU MARTY. REAL FINE TROOPS TO HELP JIM IN THE PRIZE COMMITTEE, FOR HAM HOLIDAY.

SURE ENJOYED THE PROGRAM ARRANGED BY PAUL WASHTL!! HE PRESENTED CAROL SUTTLE FROM THE TELEPHONE COMPANY. SHE DID A BANG UP JOB EXPLAINING HER EXHIBIT OF OLD AND THE VERY NEWEST OF EQUIPMENT AND EXPLAINED ABOUT SOME OF THEIR NEW SERVICES. AFTER A PROLONGED QUESTION AND ANSWER PERIOD WE ADJOURNED FOR COFFEE. WE THANK, CAROL FOR A VERY EXCELLENT PRESENTATION. PAUL HAS A COLOR SIDE PROGRAM BY FRANK W5PDH AND A PROGRAM BY K5YAQ CLARENCE FOR THE NEXT MEETING THE FIRST TUESDAY OF THE MONTH. DONT MISS IT!!!

WE WERE SADDENED WHEN WE LOST GEORGE HOLT W5DDI, THE FIRST OF THIS MONTH AFTER A SUDDEN STROKE. HE WAS SO ACTIVE IN THE NIGHT OWL NET, THE QCWA AND THE IEEE, AS WELL AS THE BAPTIST HOSPITAL SERVICE HE RENDERED SO WILLINGLY AND COMPETANTLY. HIS SHOES WILL BE HARD TO FILL. WE JOIN EUNICE, HIS CHARMING WIFE, CARRYING ON HIS VERY FINE GOALS.

THE NIGHT OWL NET IS GOING STRONG, AVERAGING OVER TWENTY CHECKINS PER EVENING. WE URGE THAT MORI MEMBERS PARTICIPATE, TO CONTINUE THE FINE SERVICE TO THE COMMUNITY IT RENDERS. WB5TFX AND HIS HAM FAMILY ARE THE NET MANAGERS AND DO A VERY FINE JOB OF IT, INDEED. WE NEED SEVERAL LOGGERS IN THE OKLAHOMA CITY AREA TO CONSISTANTLY MONITOR THE NET, AND PROVIDE ASSISTANCE TO BEN ON THOSE DAYS WHEN PROPAGATION CONDITION PREVENT A STRONG SIGNAL FROM HOLDENVILLE WHERE HE LIVES. GEORGE HOLT HAD BEEN HANDLING THE OKLA CITY END UNTIL HIS SUDDEN DEATH THIS MONTH.

WE ARE MAKING SOME PROGRESS IN OUR DIRECTION FINDING PROJECT. NEW ADDITIONS TO JIM K5VRL'S CREW ARE: KA5DFV AND A VERY VIGOROUS HELPER GARY W5GNV. THANKS TO JIMS CREW AND THE OTHERS I DID NOT MENTION FOR YOUR TELEPHONE CALLS AND HELP.

THE CLUB AUTOPATCH ON 146.07/67 IS MIGHTY BUSY....OUR GREATEST CONCERN IS THAT MANY CALLS ARE BEING MADE WITHOUT RECOGNIZING THE TRUSTEE CALL (K5ELL) AND THE STATION CALLING PRIOR TO THE ACCESS OF THE PATCH. ALL MEMBERS HAVE BEEN FURNISHED THE RULES (SUGGESTED) FOR USE OF OUR INSTALLED PATCH. REMEMBER..IF YOU ABUSE IT WE COULD LOSE IT. WE URGE MEMBER ASSISTANCE TO THOSE HAVING DIFFICULTY IN ACCESSING THE PATCH. WE DISCOURAGE TAKING THE PATCH DOWN ON A USER WITHOUT A CALL SIGN MENTIONED, WE ALSO URGE THAT MEMBERS NOTING THAT INDIVIDUALS THAT ARE REGULARLY USING OUR EQUIPMENT BE URGED TO HELP US SUPPORT THE MAINTENANCE OF IT BY JOINING THE CLUB.

FRED

KA5CXW

FOR SALE: Active receiving antenna for LF to VHF. very small. Operates off 12 VDC. Use indoors or outdoors. \$15.00. W5JJ, 789-3788. (Warr Acres, Ok)

FOR SALE-- Drake Twins-- R-4B, T-4X, & AC-4. \$550. Call TOM, K8JRM 672-8338.

AGE SAGE: HOW TO KNOW WHEN YOU'RE GROWING OLDER or IS THERE REALLY LIFE AFTER 40? WHEN YOU ARE STARTLED THE FIRST TIME YOU ARE ADDRESSED AS " OLD TIMER .!"

jim n5beq

EDMOND AMATEUR

RADIO SOCIETY

147.72/147.12

The February meeting was certainly unusual. First, our President was called out of town unexpectedly. At about 1:30, Clarence announced that he couldn't make it because he had to catch a plane to Chicago. As we all gathered at the meeting site, the wind kept most of us in our cars until we noticed it was past time for the meeting to start and the building still was not open. Campus Security Police were called and at about 2:30 we finally got in the building. Being the Vice President as well as CORA scribe, yours truly called the meeting to order and asked for committee reports. Roger KB5QC presented the minutes of the last meeting and the Treasurer's report. The club treasury is at an all-time high of \$354.00. The trusty repeater trustee said he could solve the problem for us. We tried to convince him that we did not view a positive balance as a problem, but he may not have believed us. Roger also requested that the club take action on a proposal to locate a banking institution that will give us an interest-bearing account instead of charging a high fee for checks. We took action. The club instructed him to find such a place and put our account there. Clarence, when you get back, if you can't locate Roger, be advised that we forgot to tell Roger what city our account had to be in. Or what state, for that matter.

A couple of short committee reports: the auditing committee audited the books, and the Bylaws committee hasn't done anything yet. Thank you, Bill Wright.

The generator committee reported that the power generator had been moved to Edmond, but we need a trailer and some funds for small parts. There goes the high bank account. (Actually, the main reason it was so high was that we were either out or almost out of checks.) The club voted to authorize funds for the repair of the generator. Ken Stepp reported that he has a trailer located at no cost, but we may have to buy new tires for it. Oh well, who likes high bank balances, anyway. Then the trusty repeater trustee reminded us that insurance was almost due again. Come on, fellas, let's at least keep the balance in the black at least until Clarence gets back.

Report from the CORA representatives: we had 100% representation at the last CORA meeting. Several items were reported back to the club; full details will probably be in the CORA column. Several items to be briefly mentioned: CORA will definitely not participate in the Health Fair. A new printer has been purchased for CORA and the old one will be disposed of in the near future. We will have the regional ARRL convention at Ham Holiday 81. Plans are progressing for HH81, but many important items must still be decided. There will be better prizes for the ladies this year. For some reason, the women seem to prefer microwave ovens to microwave radios. To end his report David Dowdy moved that EARS formally vote to provide financial backing to CORA for Ham Holiday. This simply means that we accept our share of responsibility in seeing that CORA has enough money to pay all Ham Holiday bills. Since Ham Holiday has always produced enough revenue to pay its own bills, it is not likely that CORA will need any additional funds. Still, they must have backing. After some discussion, the motion and second passed unanimously.

Repeater news: EARS now has a 450 repeater. Input is 448.9 MHz with output on 443.9 MHz. We know we have the repeater because Martin brought it to the meeting. Looked like a big black box to me, Martin.

KB5QC brought an antenna to the meeting for show-and-tell. He built it following an article in Sept 80 QST. It is a very good-looking and efficient 2-meter mobile antenna. Also, the program, which was presented by Bill, WD5EXY, was about antenna construction. We may work some of these ideas into construction articles in the future.

Request for help: One of our members (sorry, didn't get the name or call) needs a schematic for a vintage Harvey-Wells transmitter. Anybody got one?



News notes: KB5RR lost his antenna farm due to ice and high winds. At last report, he only had a matchbox with a 15 meter loop in the attic. Also, KB5RR is pleased with a new rig -a TS120S- that he picked up from the local used market. Now if he only had an antenna.

Well, that's it for now. If I forgot something important about the meeting, it's because I was too busy trying to look like I new what I was doing to take good notes.

---.../...--//--.../.../...--//--.../.../...--//

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FOR SALE: Kenwood TR-2400 talkie, serial number 0100054, manual, charger, box, mint condition. Want to expand HF station. Call Clarence KB5RR at (405) 341-7163.

FOR SALE: Kenwood TS-520S, DG-5, AT-200; Dentron Clipperton-L; MFJ Dual Audio Filter; Price negotiable, All or part. Call Smitty, AC5C Res 262-1250 (Morn), Work 523-2701 (Eve).

NOTICE OF AUCTION: Now accepting "sealed-bids" for the sale of CORA's line printer. This is a Syner Data Corp. "Beta" printer. This consists of a Univac print mechanism with Syner Data electronics. It is RS-232 compatable serial printer with keyboard (300 baud). Bids will be opened at the Aeronautical Center Club meeting 13 March 1981. Send bids or contact Bob Graham, WB5NSV, 405-677-8685 or Bob Pace, WA5CJG, 376-3569.

WANTED: Have a 4 BTV want to make a S band vertical. Would be interested in the coil and stinger for either 75 or 80 meters. WB5PFW Ralph 262-0436

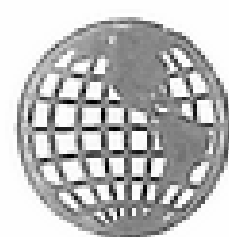
FOR SALE: One owner, Drake TR-4 with noise blanker, A/C Power supply, MS-4 Speaker & Remote RV-3 VFO. \$500.00 Firm. Bill, K5KDR, 329-6333, Norman.

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FCC JUDGE REVOKES AMATEUR RADIO STATION LICENSE OF PUEBLO, COLO., OPERATOR
(PR DOCKET NOS. 80-14-16)

FCC Administrative Law Judge Frederic J. Coufal has revoked the license of Jerry J. Wells of Pueblo, Colo., for radio station KPMGQ in the Amateur Radio Service and suspended his Amateur Advanced Class Operator License for the remainder of the term.

While Judge Coufal declined to revoke Wells' Citizen Band Radio license because of violations which occurred in the Amateur Service, he concluded that Wells, on October 28, 1978, had transmitted on 27.550 MHz, a frequency assigned to the U.S. Navy, under color of his Amateur radio operator's license in direct violation of the Amateur rules.

Since the use of unlicensed frequencies justified license revocation, Judge Coufal ruled that Wells did not possess the requisite qualifications to remain an FCC Amateur licensee. However he added that Wells could file for a new Amateur license after 90 days from the effective date of this decision.

The initial decision becomes effective within 50 days after the release of the text or unless an appeal is made within 30 days by one of the parties or the Commission orders review within this period.

- FCC -



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Captain Holly Stewart

Thank you for your letter concerning H.R. 7747. This bill was incorporated as an amendment to H.R. 6121. This bill will not be acted upon during this Congress. If it is brought up again during the 97th Congress, I will study it thoroughly, keeping your comments in mind.

In response to your letter of December 8, I contacted the Department of Justice. I have recently received their reply and am forwarding a copy of it to you. I hope that this answers your question.

Honorable Marvin Leath
House of Representatives
Washington, D. C. 20515

Dear Congressman Leath:

Your inquiry of December 15, 1980, to the Office of Legislative Affairs has been referred to this Division for reply. In your letter you enclose a December 8, 1980, letter from a constituent, Holly Stewart, concerning some action taken by the United States Attorney for the Western District of Oklahoma with respect to amateur radio operators. We apologize for the delay in responding to your inquiry. However, the delay was caused by the need to request information from the United States Attorney concerning this matter.

The matter to which Mr. Stewart refers is one involving a company in Oklahoma City which manufactures special antennas which are able to "pirate" the signal transmitted by a local home box office affiliate to its subscribers in Oklahoma City. When notified of the existence of such a "factory" and the fact that sales and usage of such antennas was taking place in Oklahoma, the United States Attorney's office opened an investigation into the matter since the manufacture and usage of the "pirate antennas" indicated a possible violation of the interception of communications statute, 18 U.S.C. 2510, et seq.

In the meantime, civil litigation ensued between the home box office affiliate and the manufacturer of the "pirate antennas." Further, the home box office affiliate distributed copies of a letter written by the United States Attorney's office indicating that the use of such an antenna was a possible violation of Federal criminal laws. Those letters, distributed by the home box office affiliate, were sent to persons at whose homes antennas appearing to be of "pirate" manufacture were observed by the affiliate's employees.

The United States Attorney has determined to take no criminal action at this time since it appears that the rights of the home box office affiliate may be adequately vindicated in civil proceedings. No seizures by Federal authorities have occurred as to any of the "pirate" antennas.

The only other matter to which Mr. Stewart could possibly refer is the actions taken by the United States Attorney's office to confiscate and condemn illegally high powered "base station" transmitters and related equipment violative of current Federal Communications Commission regulations. Seizures were made in the Western District of Oklahoma and the Eastern District of Oklahoma and criminal cases were successfully prosecuted in both districts. That litigation relates to the manufacture and sale of illegally powered amplifiers and transmitters and relates principally to the activities of "CBers" rather than "hams."

It is hoped that the above information is responsive to the concerns of Mr. Stewart. Your enclosure is returned herewith.

Sincerely,

JOHN C. KEENEY
Acting Assistant Attorney General
Criminal Division

March 1981

We met at the Peoples National Bank in Kingfisher. The meeting was short but the refreshments were plentiful and very good. I think all business meetings should be short with long happy hours after.

Ralph WA5PFK was still under the weather. We missed him and Goldie and the minutes from the last meeting and unless I find my notes taken at this meeting, we might miss the minutes for the next meeting. See how much you are missed. Sure hope you are feeling much better. Fred WA5FFE had a short bout in the hospital, but Perry W5MGZ reported that he was home and well. It also looks like Leo KA5DUO will have to walk the straight and true again, Darla has recovered. Looks better than ever, still wonder how she ever got mixed up with Leo anyway.

I was able to learn a little more on the history of the Traveling Trophy. The Trophy was started by Houston Blevins K5VFR back in 1963 for the purpose of promoting more Field Day activity on 6 meters. It was a traveling trophy that was to be given to the winning club for one year, if the same club won it 3 years in a row it would be retired to that club.

The Wheatstraw Club has revived this trophy to build interest on the bands above 50 mhz. We hope the CORA clubs will use this for some incentive to compete on these bands.

Our next meeting will be at Watonga but only a select few has enough clout to get the post office to deliver the C&E to them on Sunday morning so you will be reading this after our refreshments.

WD5JNT Ted

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- **MUSICAL TONE ACCOMPANIES KEYBOARD ENTRIES:** When a key is pressed, a brief musical tone indicates positive entry into the microcomputer. **COMPARE!**
- **PUSHBUTTON FREQUENCY CONTROL FROM MICROPHONE OR PANEL:** Frequency is selected by buttons on the front panel or microphone.
- **8 CHANNEL MEMORY:** Each memory channel is reprogrammable and stores the frequency and offset. Memory is backed up by a NICAD battery when power is removed.
- **INSTANT MEMORY 1 RECALL:** By pressing a button on the microphone or front panel, memory channel 1 may be accessed immediately.
- **MEMORY SCAN:** Memory channels may be continuously scanned for quick location of a busy or vacant frequency.
- **PROGRAMMABLE BAND SCAN:** Any section of the band may be scanned in steps of 5 or 10 kHz. Scan limits are easily reprogrammed.
- **DISCRIMINATOR SCAN CONTROL (AZDEN EXCLUSIVE PATENT):** The scanner stops by sensing the channel center, so the unit always lands on the correct frequency. **COMPARE** this with other units that claim to scan in 5-kHz steps!
- **THREE SCAN MODES WITH AUTO RESUME:** "Sampling" mode pauses at busy channels, then resumes. "Busy" mode stops at a busy channel, then resumes shortly after frequency clears. "Vacant" mode stops at a vacant channel and resumes when signal appears. If desired, auto resume may be prevented by pressing one button. **COMPARE!**
- **REMOVABLE HEAD:** The control head may be located as much as 15 feet away from the main unit using the optional connecting cable. **COMPARE!**
- **PL TONE OSCILLATOR BUILT IN:** Frequency is adjustable to access PL repeaters.
- **MICROPHONE VOLUME/SQUELCH CONTROL:** Both functions may be adjusted from either the microphone or front panel.
- **NON-STANDARD OFFSETS:** Three accessory offsets can be obtained for CAP/MARS or unusual repeater splits. CAP and Air Force MARS splits are **BUILT IN! COMPARE!**
- **25 WATTS OUTPUT:** Also 5 watts low power to conserve batteries in portable use.
- **GREEN FREQUENCY DISPLAY:** Frequency numerals are green LEDs for superior visibility.
- **RECEIVER OFFSET:** A channel lock switch allows monitoring of the repeater input frequency. **COMPARE!**
- **SUPERIOR RECEIVER:** Sensitivity is better than 0.28 uV for 20-dB quieting and 0.19 uV for 12-dB SINAD. The squelch sensitivity is superb, requiring less than 0.1 uV to open. The receiver audio circuits are designed for maximum intelligibility and fidelity. **COMPARE!**
- **ILLUMINATED KEYBOARD:** Keyboard backlighting allows it to be seen at night.
- **TRUE FM, NOT PHASE MODULATION:** Transmitted audio quality is optimized by the same high standard of design and construction as is found in the receiver. The microphone amplifier and compression circuits offer intelligibility second to none.
- **OTHER FEATURES:** Dynamic microphone, built-in speaker, mobile mounting bracket, external remote speaker jack (head and radio) and much, much more. All cords, plugs, fuses, microphone hanger etc. included. Weight: 6 lbs.
- **ACCESSORIES:** CS-ECK 15-foot remote cable ... \$35.00. CS-6R 6-amp ac power supply ... \$49.95. CS-AS remote speaker ... \$18.00. CS-TTK touch-tone® microphone kit ... \$39.95.

WATTS

ELECTRONIC SALES

HARRY WATTS, WB5DGT 205 S MAIN VICI OK 73859 (405) 995-4761

ORSI Repeater Listing, 2-7-81

Key to Notes: O-Open access, C-closed private repeater, A-auto patch
E-Emerg. pwr., Y-RTTY, Z-direct access to PD, L-link &/or crossband

Frequency	Location	Area	Call	Sponsor	Notes
52.68-52.525	OKC	C	K5JL	OKC Auto Patch	O
4.61-5.21	Broken Arrow	NE	WA6HNO	WA6HNO	
4.83-5.43	OKC	C	WA5CZN	WA5CZN	O
4.87-5.47	Tulsa	NE	AB5M	AB5M	C
4.89-5.49	OKC	C	WA5CZN	WA5CZN	O
6.01-6.61	Lawton	SW	WR5AMC	WB5LOZ	O
6.01-6.61	Hugo	S	WB5TTU	Hugo ARC	O
6.01-6.61	Glumet	C	K5GDE	Wheatstraw ARC	O
6.01-6.61	Beaver	NW	WR5ATW	Beaver ARC	O
6.04-6.64	Granite	SW	W5CME	Granite ARC	O
6.04-6.64	Cavanal Mtn	E	WR5AII	Border ARC, Ft. Smith	O
6.07-6.67	OKC	C	K5ELL	MORI	O A
6.10-6.70	OKC	C	WR5ASI	WA5TSJ	Y
6.10-6.70	Tulsa	NE	K5LAD	K5LAD	Y
6.10-6.70	Ardmore	S	W5RFX	W5RFX	Y only
6.13-6.73	Woodward	NW	W5HGH	Gr. Plains ARC	O
6.13-6.73	Stillwater	N.Cent.	WR5AFS	Stillwater ARC	O E
6.13-6.73	Duncan	S	WR5ATV	Chilsohm Trail ARC	O A
6.16-6.76	OKC	C	WR5ANG	76'ers ARC	O A E
6.16-6.76	Bartlesville	NE	WR5ADO	B'ville ARC	O
6.16-6.76	Elk City	W Cent.	WB5FBU	Elk City ARC	O
6.19-6.79	Altus	SW	WR5ANX	SORA	O E
6.19-6.79	Ardmore	S	W5BLW	AARC	O
6.19-6.79	Miami	NE	WR5AHY	Miami ARC	O
6.22-6.82	Tulsa	NE	WA5LVT	TRO	O A E Z
6.22-6.82	OKC	C	K5JL	OKC Autopatch	O E
6.25-6.85	Muskogee	E. Cent.	WR5AFY	Muskogee ARC	O
6.25-6.85	OKC	C	WR5AVM	W5PAA	O A E
6.28-6.88	Tulsa	NE	WA5LVT	TRO	O A E Z
6.28-6.88	Norman	C	WR5AFW	OU ARC	O A
6.28-6.88	Lawton	SW	WR5AJV	Ft. Sill ARC	O
6.31-6.91	Kingfisher	C	Pend	Kingfisher ARC	O
6.31-6.91	Shawnee	C	WR5AQQ	Tri-City ARC	
6.34-6.94	Tulsa	NE	WA5LVT	TRO	O E L
6.34-6.94	OKC	C	K5VRL	MORI	O E
6.34-6.94	Enid	N Cent.	WR5ABW	Enid ARC	O A
6.34-6.94	Durant	S Cent.	Pend	Durant ARC	O
6.37-6.97	Ardmore	S	N5AO	AARC	O
6.37-6.97	Ponca City	N Cent	WR5ADD	Ponca City ARC	O A
6.37-6.97	Claremore	NE	N5TM	N5TM	O
6.37-6.97	Cordell			WB5KEJ	O
6.40-7.00	OKC	C	WB5TKG	WB5TKG	
6.625-6.025	Norman	C	WA5RPP	WA5RPP	
6.655-6.055	Bartlesville	NE	K5ULZ	K5ULZ	O
6.985-6.385	Bartlesville	NE	WR5ADO	B'ville ARC	O
7.60-7.00	Tulsa	NE	WA5YPT	Am. Airlines	O
7.63-7.03	Edmond	C	WR5AMJ	Edmond ARC	O

page 1 of 2

(continued)

(continued)
Frequency

Location

Area

Call

Sponsor

Notes

7.66-7.06	Pryor	NE	WR5ATN	Pryor CD	
7.66-7.06	Norman	C	W50U	Scars	
7.69-7.09	Oologah	NE	WA5LVT	TRO	O E L
7.69-7.09	Choctaw	C	K5EGQ	Choctaw ARC	0
7.72-7.12	Guymon	NW	WD5EII	Guymon ARA	
7.72-7.12	Mooreland	NW	KA5CJG	GR Plains ARC	
7.72-7.12	Tulsa	NE	WB5KEQ	WB5KEQ	C inter conn.
7.72-7.12	Edmond	C	WD5FEI	Edmond ARS	to 29.6 pl
7.75-7.15	Enid	N Cent.	WR5ABW		O A E
7.75-7.15	Grove	NE	K5PJR	K5PJR KOMUX	O E L
7.78-7.18	Tulsa	NE	WB5EVU	WB5EVU	C
7.78-7.18	Ada	Cent	WB5PKJ	WB5PKJ	0
7.78-7.18	Seiling	NW	KA5CJG	Gr. Plains ARC	0
7.81-7.21	OKC	C	K5JL	OkC Autopatch	O E (A)
7.84-7.24	El Reno	C	K5PJR		O A
7.87-7.27	Stillwater	N Cent.	WR5ASW	K5FVL	
7.87-7.27	Tulsa	NE	WR5ASX	WB5WDW	
7.90-7.30	Concharti Mtn	NE	WR5AWA		
7.90-7.30	ALVA	NW	KBOHH	Grant Mains ARC	
7.93-7.33	Edmond	C		EARC	
7.93-7.33	Muskogee	E Cent.	WR5AOD		
7.96-7.36	Big Cabin	NE	WR5ARZ		
7.96-7.36	Laverne	NW	WD5CSW	Laverne RPT Society	
7.96-7.36	Byars	S	WA5IQH	WA5IQH	
7.99-7.39	Tulsa	NE	WB5NJU		

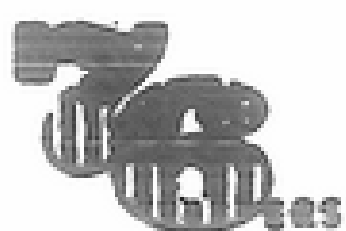
220 MHz

2.28-3.88	Waurika	SW	WA6HGK
2.30-3.90	Tulsa	NE	WB5BET
2.34-3.94	Muskogee	E Cent.	WB5AOH
2.34-3.94	Grove	NE	K5PJR
3.34-4.94	Tulsa	NE	K5LAD

440 MHz

449.1-444.1	Tulsa	NE	WR5AHN	
449.1-444.1	OKC	C	WA5TRS	M O R I
449.1-444.1	Altus	SW	WR5ANX	
449.2-444.2	Tulsa	NE	WA5BPS	
449.2-444.2	Edmond	C	WR5AWJ	EARC
449.3-444.3	OKC	C	K5JL	O C A P A
449.3-444.3	Tulsa	NE	K5LAD	
449.4-444.4	Muskogee	E Cent.	WB5AOH	
449.4-444.4	Enid	N Cent.	W5HTK	
449.7-444.7	OKC	C	WD5FAM	
449.7-444.7	Ponca City	N Cent.	W5TXF	
449.6-444.6	Tulsa	NE	N5ANY	N5ANY
448-65-443.65	Del City	C	K6DBR	K6DBR
443.825-8.825	OKC	C	WD5AII	
439.425-427.425	Tulsa	NE	WA5LVT	
439.25-427.25	Grove	NE	K5PJR	
437.25-425.25	OKC	C	W5LIL	ATV Society
449.85-444.85	El Reno	C	Pend	
449.85-444.85	Claremore	NE	N5TM	
442.85-447.85	OKC	C		

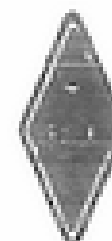
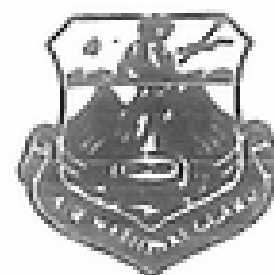
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BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

Sponsored by Oklahoma Air National Guard
ARRL affiliated



76'ERS PROGRAMS

FEBRUARY PROGRAM Icy roads and near blizzard conditions caused cancellation of the Feb. meeting. The program scheduled was on ASCII and Computers in Amateur Radio by Jerry, N5AUH and his team of experts. This program will probably be given in APRIL. Watch for further announcements.

MARCH PROGRAM Mike McElroy, WA5PDH is the Communications Supervisor for AmCare. He is going to tell us about some of the AmCare emergency and communications facilities and operations. Also to be considered is the amateurs' role, past and future.

ACTIVITIES in addition to the regular programs. A list of possible activities is given below. Most were suggested recently. Who would like to grab one of these and activate us ??

Set up station at shopping mall

Special Field Day

Senior Citizens Traffic

Children's Hospital Traffic

Demo at Schools, Scout Meetings, etc.

Direction Finding - Track Down Cussers

Parties, Picnics, eatcetera

Our own Operating Contests

= = = Bill, WA5RAQ 632-4375

Central Oklahoma Radio Amateurs

The Central Oklahoma Radio Amateurs Board of Directors met for its monthly business meeting on Tuesday, January 27, 1981. Twenty-nine guests and representatives were in attendance. Remember, anyone is welcome to attend the CORA meetings--come on by and see first-hand what your organization is doing for you.

Bob Graham, WB5NSV, reports that he has located and purchased that long-awaited printer. Thanks goes to Bob and all of you who aid us, the amateur community, in receiving our monthly issues of the Collector and Emitter.

The time is drawing nearer, and of course, the main topic of discussion was Ham Holiday '81 in conjunction with The West Gulf Coast Division Convention. Final arrangements are being made for the location, which will be discussed at the February meeting of CORA. The 1981 convention budget was established, and if some of you are working on your "convention budgets", remember, pre-registration is \$6.00/person and \$7.00/person at-the-door admission.

Again, if any of you have ideas for something you might enjoy at a convention, let us know! See you next month.....Kay, WD5DYJ, CORA Secretary



Edmond Amateur Radio Club
P.O. Box 76252 / Okla. City, Ok. 73147

NEXT MEETING: MARCH 2, 7:30 PM
Written and edited for EARC by
Stan Van Nort, WB5UIY. Other
comments are not welcomed.....

FEBRUARY DINNER MEETING

Last month's social event was a fantastic dinner at the STAMPEDE RESTAURANT with over 40 members and spouses present.

With only a minor problem of getting a little service, everyone there enjoyed the meal and the entertainment. Two of our newer members came out with their families and got to meet the "gang". The kids were well occupied with a steep slide and rides on the mechanical bull, BUFORD. With a challenge by several "urban cowboys", yours truly made a successful ride on BUFORD. Man! What a ride, my arm was sore for a week. It wasn't the wild kicking that caused that, it was the death grip I had on that wicked thing for fear of being an astronaut. Then the other cowboys(?) failed to keep up their end of the deal. They were much relieved when the plug was pulled and the band started again. I learned again that several members are still endowed with the Hot Air Syndrome or full of Buford Chips.

Howard Thompson, W5UVI, and his wife, Bertha made their debut on the dance floor doing the Cotton-eyed Joe and several other fancy foot-steps. Hence forth jelly-belly will have a new meaning to those present. Sure wish we had a photograph of Howard out there. With due respect, though, they did very well and they should organize a dance for one of our future social meetings. It would be real interesting to see what Larry Dillard could do.

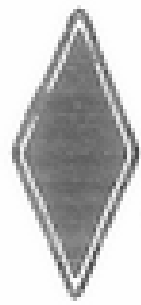
That particular meeting was moved to a Tuesday night only to make reservations. Make note that all other meetings will again be on the First Monday of every month.

COMMENTS

At the last meeting a technical committee was set up to study new ideas for the club's three repeaters. One main topic was installing remote receivers around the metro-area and linking them back to the repeater. An electronic voter would select the best signal from the receivers and that would be re-transmitted. This system would almost eliminate any dead spot and would extend the range of mobile units on the road. Another suggestion was to make a link with a Tulsa repeater or other out-of-town system. The problem here is every member would like to have something special and unique about our repeater. It takes man-power and financing to get these projects done and operating properly. At the last meeting everybody showed a desire for new projects, but no one volunteered to be on the committee. I don't need to say anymore. If you and your fellow members want this club to have an elite and exclusive repeater system, then I should see a large group with enthusiasm at this coming meeting. Thank you, Stan-WB5UIY, President.

SPECIAL CAR TAGS

The special car tags with your call signs are ready to be picked-up at the State Capital in the Tax Commission Office. Provided you ordered one back in October 1980. You will need to have a current 1981 tag (regular display type) and supply the Commission people with that information. Also notice that when you renew the regular tag in the expiring month of 1981, the new sticker that reads "82" along with a serial number is attached to the regular tag in the upper right hand corner. (Opposite the expiring month sticker). The new 82 sticker should not be put on the special call sign tag. If the Tax Commission does not make new tags for 1982, then a sticker will be issued next winter to update the current tag. Also note that 1980 call sign and personalized tags have expired and should not be displayed now. (Expired Jan. 31) Hope I saved someone....STAN



THE AMERICAN RADIO RELAY LEAGUE, INC.

OFFICE OF THE
SECTION COMMUNICATIONS-MANAGER

LEONARD HOLLAR W5JFSN

QST
OFFICIAL ORGAN

As, We write this, Preparations are beginning to get under way for Amateurs to help celebrate the American Red Cross 100th Birthday. This will be done by originating Traffic from as many of the 77 counties as possible. All of the E.C.s will be contacted as the Prime Amateurs to make the contacts in his County. Other Amateurs will be contacted in the Counties not covered by an E.C.

I am proud to say that in many of the Counties, very little work needs to be done. Many of our Operators already have a very good rapport with their local Red Cross Chapters.

We are all saddened by the untimely death of George, W5DDI. I think Carl W5JJ expressed our thoughts the best, "George was a gentleman of the Old School, A willing worker in many fields, He will be sorely missed".

I do not know the reason, But there is an upswing of Profanity and other interference on the various Bands. Some of this is coming from people who resent our operations on a particular frequency. Some is coming from those, whose habit it is to use much profanity in every day life. Or to use it because it sounds big and smart. or so it seems to this writer. There is one generally known fact: The less said to or about these people on the air, the better off we are. Ignoring them does not feed their EGO and that is contrary to what they want.

The Oklahoma Repeater Society met at Altus recently, with a 'fair' crowd'. Considerable work was accomplished in a short time. This group is working hard to help keep our VHF & UHF Bands from becoming totally chaotic by voluntary Frequency management, as well as offering help on technical and legal problems. Your support would be appreciated.

January shows typical after Xmas slump.

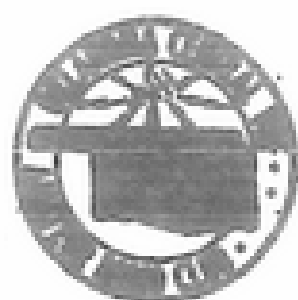
NET	Sessions	QNI	QTC	WX
O.P.E.N.	4	266	3	
O.F.O.N.	21	332	61	
S.T.N.	27	525	82	
O.T.W.N.	27	489	311	288
O.L.Z.	31	257	81	
Night Owl	31	721	90	
Q.C.W.A.	4	150	14	
N.W.O.S.N.	13	157	9	

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Club
NEWS
The Other Quality Standard

EDITOR: Joe Buswell, K5JB 732-0676

MINUTES OF FEBRUARY MEETING

MEETING WAS CALLED TO ORDER AT 8:03 PM BY PRESIDENT RALPH, WD5IRB, WITH 26 MEMBERS AND GUESTS PRESENT.

MINUTES PUBLISHED IN THE C&E AND TREASURER'S REPORT WERE ACCEPTED.

RALPH REPORTED ON RECEIPT OF THE HF AMPLIFIER IN THE CLUB STATION. ALL PREVIOUSLY REPORTED NEW EQUIPMENT HAS BEEN RECEIVED EXCEPT THE ICOM 255 FM RIG. SOME INSTALLATION WORK IS SCHEDULED FOR THE FOLLOWING DAY.

BOB, W5HXL, ANNOUNCED DETAILS OF THE LAWTON HAMFEST.

CHARLIE, WA5JGU, WITH HELP FROM BOB, W5HXL, RECALLED DETAILS OF HAM HOLIDAY AND WEST GULF CONVENTION ARRANGEMENTS. BOB, WITH HELP FROM CHARLIE, RECALLED HIS CALL. THE CLUB PASSED A MOTION THAT IT PARTICIPATE FINANCIALLY IN HAM HOLIDAY UNDERWRITE EXPENSES, IN CASE OF A LOSS, TO A MAXIMUM OF \$200.00.

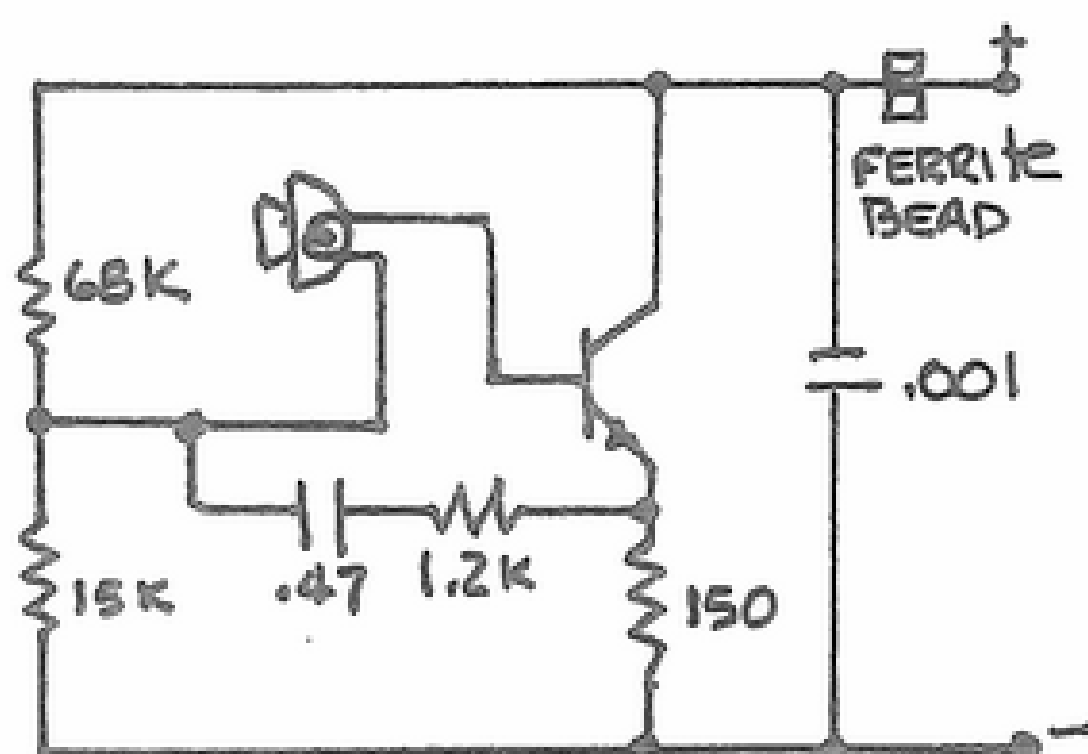
PAUL, WA5HTL, BROUGHT UP THE SUBJECT OF FIELD DAY. RESULTS WERE INCONCLUSIVE.

CHARLIE, WA5JGU, AND RALPH, WD5IRB, ARE GOING TO RE-MUFFLE THE PE-75, ...THAT IS, SOMETIME AFTER CHARLIE BECOMES A GRANDFATHER...AGAIN.

MEETING WAS AJOURNED AT 8:51 AND THE GROUP DIVED INTO THE COFFEE AND DONUTS. JOE, K5JB, SECRETARY

ONE MORE MICROPHONE CIRCUIT

AS A RESULT OF LAST MONTH'S MICROPHONE ARTICLE, N5MS CAME UP WITH AN ADDENDUM ON MOTOROLA MICROPHONE PREAMPS. TO CHECK MY FACTS OUT HE PERFORMED SURGERY ON A RELATIVELY LATE MODEL MOTOROLA MICROPHONE TO SEE WHAT WAS IN IT. THAT GUY IS MORE CURIOUS THAN I. HE SAID THE MIKE WAS BAD ANY BUT I CHECKED HIS FACTS OUT AND IT WASN'T. ANYWAY, THE CIRCUIT BELOW IS WHAT WAS FOUND INSIDE THE ELEMENT.



LATER MODEL MOTOROLA PREAMP

THIS LOOKS LIKE THE TYPE OF MIKE THAT MIGHT HAVE BEEN USED ON A MOTRAC WHICH USES NEW FANGLED TRANSISTORS IN THE FIRST AUDIO STAGE. IN ORDER TO MAKE IT LOOK ELECTRICALLY LIKE A VACUUM TUBE CATHODE CIRCUIT SO THE MICROPHONE CAN BE MADE TO LOOK ELECTRICALLY LIKE A CARBON CIRCUIT, THE MOTRAC FEEDS CURRENT TO THE PREAMP FROM A 9 VOLT SOURCE AND TWO SERIES RESISTORS OF 1K AND 560 OHMS. THE AUDIO VOLTAGE FROM THE PREAMP SHOWN HERE IS DEVELOPED ACROSS THE 560 OHM RESISTOR.

IN THIS CIRCUIT, THE TRANSISTOR IS OPERATING AS A CURRENT MODULATOR IN COMMON EMITTER, CLASS A CONFIGURATION. THE .47 UF CAPACITOR AND 1.2K RESISTOR ARE PROBABLY INTENDED TO DO SOME FREQUENCY RESPONSE SHAPING FOR THE PREAMP. THEY COULD HAVE PROBABLY BEEN LEFT OUT FOR BETTER HIGH FREQUENCY RESPONSE. ANY MORE CIRCUITS FOLKS? K5JB

JB: "CY, WHY DOES YOUR RADIO HUM?" TKG: "CUS IT DON'T KNOW THE WORDS"

HOME BREW EAR-FOAM...ER, PHONE

DID YOU EVER LOOK AT THOSE LITTLE WHITE PLASTIC THINGS WITH SKINNY WIRE AND MINATURE PHONE PLUGS THAT COME PACKAGED WITH JAPANESE TRANSCIEVERS? DID YOU EVER FIGURE OUT WHAT THEY ARE? THE PLUG FITS ONE OF THE SOCKETS ON THE RADIO AND WHEN THE RADIO IS TURNED ON, NO SOUND COMES OUT OF THE SPEAKER BUT IF THE LITTLE WHITE PLASTIC THING IS HELD NEAR THE EAR, SOUND CAN BE HEARD COMING OUT OF IT. THE ONLY PROBLEM IS HOW IS THE LITTLE CRITTER SUPPOSED TO BE USED? PUT IT IN YOUR EAR LIKE A BEAN AND THE SOUND ISN'T HALF BAD, BUT THEN, PLOP!, IT FALLS OUT. IT MUST BE SOME KIND OF EARPHONE BUT SURELY SOMETHING IS MISSING OF THE PROPER METHOD OF USE WOULD BE MORE EVIDENT.

WELL, WHILE EXPERIMENTING ONE EVENING, I DISCOVERED HOW THESE CUTE LITTLE TRANSDUCERS CAN BE USED. THEY'RE NOT SUPPOSED TO BE PUT IN THE EAR AT ALL. IT IS NECESSARY TO SCROUNGE UP SOME PARTS AND THEN THE LITTLE THINGS CAN BE PUT TO GOOD USE. FIRST, ONE HAS TO MAKE A TRIP TO THE NEAREST FIXED BASE OPERATOR AT AN AIRPORT, OR DROP IN TO SEE THE SAFETY OFFICER AT THE PLANT. OBJECT OF THE SEARCH IS FOAM EAR PLUGS CALLED E·A·R, MADE BY , WHAT ELSE, E·A·R CORP. , 7911 ZIONSVILLE ROAD, INDIANAPOLIS IN 46268, OR, DECIDAMP HEARING PROTECTORS MANUFACTURED BY MARION HEALTH AND SAFETY, INC., 1515 ELMWOOD ROAD, ROCKFORD IL 61101. FOR YOU GOVERNMENT EMPLOYEE TYPES, HAVE THE SAFETY OFFICER ORDER NSN 6515-00-139-0483 TO GET A PACKAGE OF ABOUT A DOZEN. EVEN IF THEY AREN'T USED FOR THE PROJECT DESCRIBED HERE, THEY ARE THE ONLY EARPLUGS THAT WORK WORTH A FLIP AND LET ONE CARRY ON A CONVERSATION IN A NOISY ENVIRONMENT.

NEXT, IT IS NECESSARY TO MAKE A STOP AT THE FRIENDLY NEIGHBORHOOD HOBBY SHOP AND PICK UP SOME BRASS AND PLASTIC TUBING THAT ARE COMPATABLE IN SIZE, MEANING THE PLASTIC TUBING HAS TO FIT TIGHTLY OVER THE BRASS TUBING. THE BRASS TUBING I USED WAS 3/32 INCH OD. THE SMALLEST MODEL AIRPLANE FUEL LINE TUBING FIT THIS TUBING JUST ABOUT RIGHT. BUY ONE PIECE OF BRASS TUBING, A COUPLE OF FEET OF THE PLASTIC TUBING AND IF YOU DONT ALREADY HAVE SOME, PICK UP SOME SUPER GLUE AND SILICONE ADHESIVE-SEALANT LIKE RTV, OR EQUIVALENT.

ONCE AT THE WORKBENCH, I CUT OFF A PIECE OF BRASS TUBING ABOUT 1/2 INCH LONG AND SMOOTHED THE CUT END WITH A FILE. AFTER HEATING IT WITH A CIGARETTE LIGHTER, I PRESSED IT INTO THE OPENING OF THE EARPHONE JUST ENOUGH TO ENLARGE THE HOLE FROM WHICH SOUND WAS LAST HEARD. NEXT A DROP OF SUPER GLUE WAS APPLIED TO THE TUBE AND IT WAS INSERTED SO THAT ABOUT 1/4 INCH EXTENDED OUT OF THE EARPHONE HOUSING. AFTER ALLOWING THE GLUE TO SET FOR A FEW MINUTES, I TRICKLED A LITTLE WATER ON THE UNCURED SURPLUS GLUE, FORCING IT TO SOLIDIFY AND PREVENTING IT FROM PERMANENTLY ATTACHING SAID EARPHONE TO MY FINGERS, EARLOBE, OR WHATEVER. NEXT, THE FOAM EARPLUG WAS OPERATED ON TO PREPARE IT FOR MARRIAGE TO THE PLASTIC TUBING. I USED A LEATHER PUNCH TO PUT A 3/32 INCH HOLE THROUGH THE PLUG RIGHT ON THE AXIS OF THE THING. TO DO THIS, I SQUASHED THE EARPLUG LONGITUDINALLY, ER, LENGTHWISE, AND PUNCHED A NEATO HOLE. AFTER A PERIOD OF RELAXATION, THE FOAM RETURNED TO ITS ORIGINAL SHAPE WITH A PERFECT HOLE DOWN THE CENTER. I AM SURE AN AWL OR OTHER POINTED TOOL WOULD WORK FINE TO ACCOMPLISH THE FINAL RESULTS.

A PIECE OF PLASTIC TUBING WAS PREPARED BY HEATING IT NEAR THE END TO ALLOW IT TO DROOP AND FORM A 90 DEGREE BEND. THIS HAD TO BE DONE A COUPLE OF TIMES TO GET A BEND WITHOUT COLLAPSING THE TUBE. THE BEND WAS LOCATED ABOUT 1/2 INCH FROM THE END OF THE TUBE. AFTER COOLING, THE TUBE WAS SMEARED WITH SILICONE ADHESIVE AND PUSHED INTO THE EARPLUG. THIS ASSEMBLY WAS SET ASIDE TO CURE FOR A DAY. IN MY EARPLUG, I DIDN'T SHOVE THE PLASTIC TUBE ALL THE WAY THROUGH BUT IF AN AWL HAD BEEN USED, IT MIGHT HAVE BEEN A GOOD IDEA TO LEAVE THE STUB OUTBOARD OF THE BEND A LITTLE LONGER SO THE TUBE COULD BE PUSHED INTO THE EARPLUG UNTIL ALMOST FLUSH WITH THE FAR SIDE. THIS WOULD PREVENT THE FOAM FROM CLOSING THE HOLE AND BLOCKING SOME OF THE SOUND.

ONCE THE JOINT BETWEEN THE TUBING AND EARPLUG WAS CURED, THE TUBING WAS CUT TO A LENGTH OF ABOUT SEVEN INCHES. THE FREE END WAS THEN PUSHED OVER THE BRASS TUBE IN THE EARPHONE AND THE ASSEMBLY WAS PUT TO TEST. THE WAY THESE EARPLUGS ARE USED, THEY ARE CRUSHED TO REDUCE THE DIAMETER AND QUICKLY PLACED IN THE EAR. WHILE BEING LIGHTLY HELD IN PLACE WITH TIP OF A FINGER, THE EARPLUG EXPANDS TO CONFORM TO THE SHAPE OF THE EAR. PRESSURE CREATED IN THE EAR IS VERY LIGHT AND THERE IS NO DISCOMFORT BUT THE RESULTING FIT IS SO GOOD THERE IS A FAIR AMOUNT OF RESISTANCE TO FALLING OUT.

THE RESULT OF THE FIRST TEST WAS EXCELLENT. GREAT SOUND! WITH THE LENGTH OF PLASTIC TUBING USED, THE TRANSDUCER COULD BE PLACED BENEATH THE COLLAR RELIEVING THE EARPLUG OF MUCH OF THE WEIGHT OF TRANSDUCER AND CORD. THE LITTLE PLASTIC TUBE RUNNING FROM THE EAR TO THE COLLAR SHOULD LEAVE ONLOOKERS WITH THE IMPRESSION THAT YOU ARE UP TO SERIOUS BUSINESS AND NOT A TEENY BOPPER LISTENING TO THE TRANNY.

THE ULTIMATE GOAL OF THIS PROJECT COMES NEXT AND THE REASON FOR BUYING BRASS TUBING SHOULD NOW BECOME EVIDENT. SINCE TWO EARS ARE BETTER THAN ONE, A SECOND EARPLUG WAS PREPARED JUST LIKE THE FIRST ONE. WHILE THE SILICONE ADHESIVE IS CURING A LITTLE WHITTILING ON THE REMAINING BRASS TUBING IS IN ORDER. ONE PIECE ABOUT ONE INCH LONG AND A SECOND PIECE ABOUT 5/8 INCH LONG ARE CUT AND THE CUT ENDS DRESSED. A FILE OR DREMEL IS PUT TO WORK SHAPING THE PIECES AS SHOWN IN FIGURE 1.

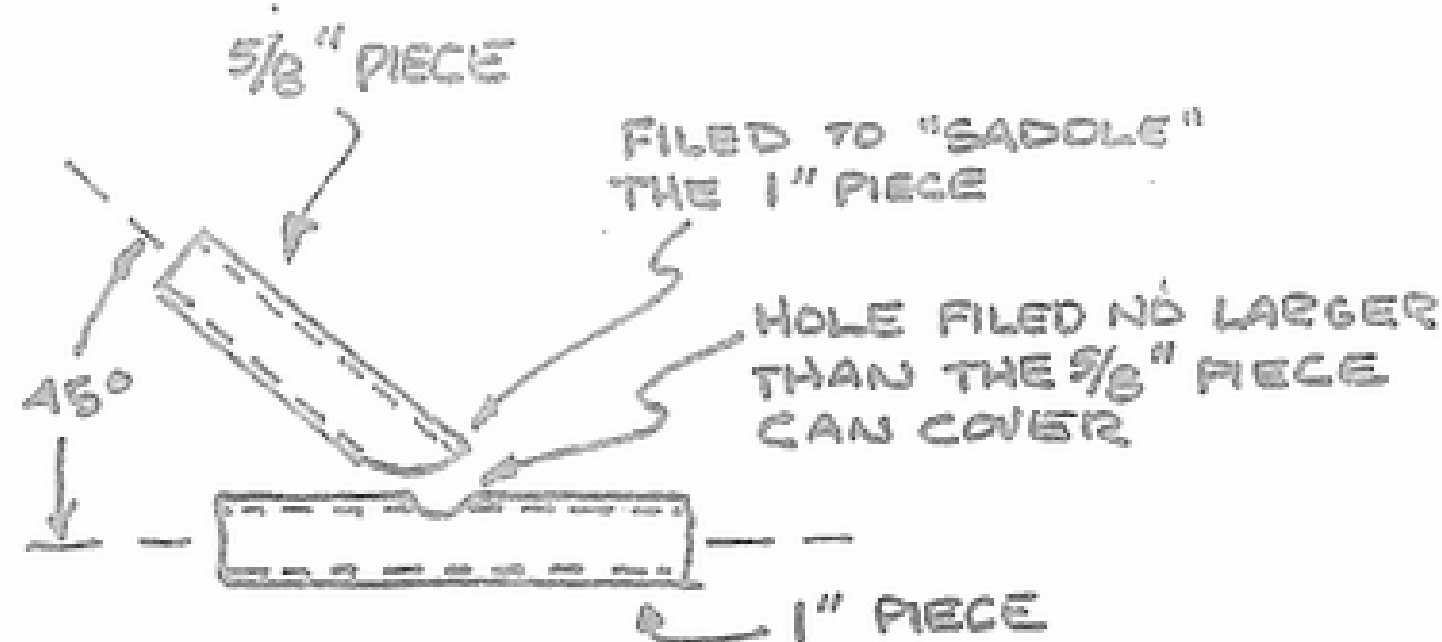


FIGURE 1 BRASS PLUMBING

WITH THE TWO PIECES HELD IN PLACE ON A SUITABLE WORK SURFACE, THE PARTS ARE SOLDERED TOGETHER USING ORDINARY LEAD SOLDER OF THE ELECTRICAL VARIETY. ONCE THEY ARE WELL STUCK, TOUCH-UP CAN BE DONE TO FILL ALL GAPS BY CAREFUL APPLICATION OF THE IRON. THE INTERNAL PASSAGES MUST BE CLEAR. TEST FOR THIS AND FOR LEAKS CAN BE PERFORMED BY APPLYING MOUTH SUCTION AND COVERING

PORTS, AS APPROPRIATE. DRESS UP THE SOLDER GLOBS AND REFER TO FIGURE 2 FOR ASSEMBLY OF THE BINAURAL EARPHONE.

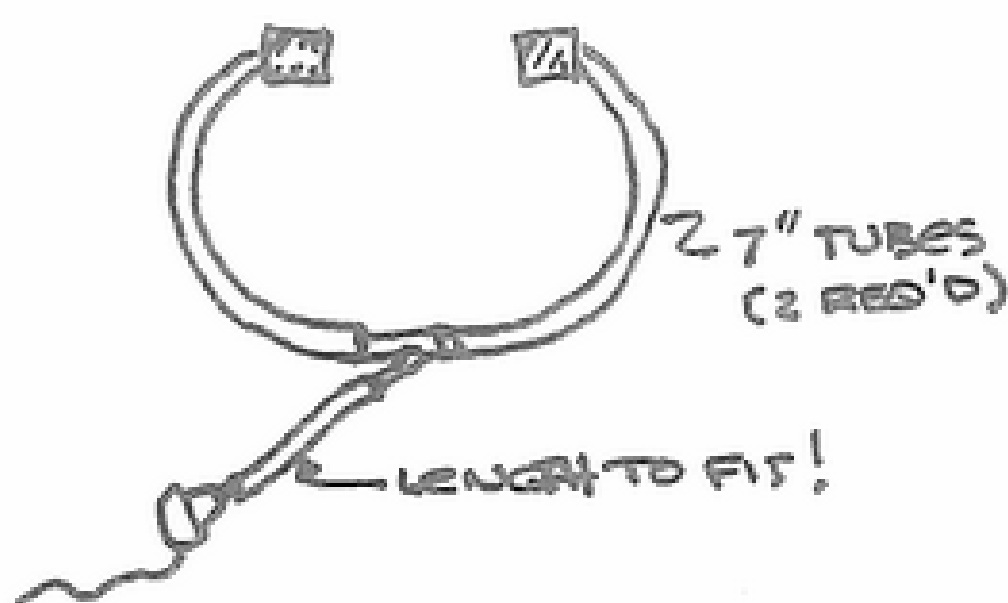


FIGURE 2, TWO EAR HOOK-UP

THE ASSEMBLY IS MADE BY CONNECTING THE EARPLUG TUBES TO THE ENDS OF THE ONE INCH TUBE. A PIECE OF PLASTIC TUBING, 3 OR 4 INCHES LONG CAN BE CONNECTED BETWEEN THE 5/8 INCH TUBE AND THE TRANSDUCER. IF A PACIFIC PLANTRONICS STARSET IS TO BE USED, THE PLASTIC TUBING FROM THE JUNCTION TO THE STARSET SHOULD BE JUST LONG ENOUGH TO LIE COMFORTABLY ALONG THE TUBE GOING TO THE EAR HOLDING THE STARSET.

THE SOUND EFFECT OF THIS BINAURAL HAYWIRE IS FANTASTIC. SOME OF THE HIGH FREQUENCIES SEEM TO BE ATTENUATED SO I GUESS YOU WOULDN'T CALL IT HIGH FI BUT IT CERTAINLY IS GOOD QUALITY COMPARED TO THE SOUND OF A WALKIE TALKIE SPEAKER. OF COURSE, WHEN OPERATING IN A NOISY ENVIRONMENT, BACKGROUND INTERFERENCE IS CONSIDERABLY REDUCED.

A WORD OF CAUTION IS IN ORDER. WHEN DRIVING A CAR, TRAFFIC SOUNDS ARE SEVERELY ATTENUATED WHEN BOTH EARS ARE PLUGGED UP. IT WOULD BE A GOOD IDEA TO FORGO STUFFING BOTH PLUGS IN THE EARS AND PRESERVE INTEGRITY OF YOUR CAR, YOUR BODY AND MAYBE THE FIREFIGHTERS ON THE BIG RED FIRE TRUCK ABOUT TO MOW YOU DOWN.

THE ONLY PROBLEM WITH THE FOAM EARPLUGS IS THAT THEY TEND TO GET DIRTY EASILY. IF THEY ARE ROLLED BETWEEN THE FINGERS TO REDUCE THEIR DIAMETER, THEY PICK UP EVERY BIT OF CRUD OFF THE FINGERS AND ALSO WHEN INSTALLED, COLLECT WAX FROM THE EARS. IN THEIR NORMAL MODE OF OPERATION, THEY ARE CONSIDERED DISPOSABLE, BUT AFTER ALL THE CUSTOM WORK, I DOUBT ANYONE WOULD WANT TO DISCARD A PAIR AT THE END OF A DAY OF HARD LISTENING. THE SOLUTION I FOUND WAS TO SCRUB THEM IN HOT DISH WATER WITH A TOOTH BRUSH AND SET THEM WITH THE DISHES TO DRY FOR A WHILE. THE ORIGINAL EAR PLUGS I MODIFIED STILL LOOK BRAND NEW.

FOR THOSE OF YOU WHO DON'T CARE TO GO THE HOME BREW ROUTE, THERE IS A MORE ELEGANT SOLUTION. HEARING AID PLACES LIKE BELTONE, SEE DON, AESN'S AD ELSEWHERE THIS ISSUE, ARE EQUIPPED TO PREPARE CUSTOM EARMOLDS MADE OUT OF PLASTIC. THEY ARE PREPARED BY MAKING A PATTERN OUT OF SOME STUFF THAT LOOKS LIKE BUBBLE GUM THAT IS SQUIRTED IN THE EAR. IT QUICKLY CURES TO A RUBBER-LIKE CONSISTENCY AND IS USED TO MAKE A MOLD WHICH IS A COPY OF THE APPROPRIATE EAR. SEVERAL OPTIONS ARE AVAILABLE. ONE SPECIFIC DESIGN IS USED BY AIR TRAFFIC CONTROLLERS WITH MS-50 HEADSETS. ANOTHER DESIGN IS SPECIFIED BY SECRET SERVICE GUM SHOES. IT DOES NOT BLOCK AMBIENT SOUNDS. SOME EAR MOLDS HAVE PLASTIC TUBES INSTALLED, OTHERS HAVE SPRING SNAPS TO MATCH TELEX AND MOTOROLA EARPHONES. THIS IS A BIT MORE EXPENSIVE, ER, A LOT MORE EXPENSIVE ROUTE TO GO THAN THE FOAM EARPLUGS BUT THESE LITTLE CRITTERS DON'T SPEND AS MUCH TIME IN THE KITCHEN GETTING WASHED AND DRIED, AND YOU HAVE TO ADMIT, THEY HAVE A LOT OF CLASS.

WITH THE FULL FITTING EAR MOLDS, THE PREVIOUSLY MENTIONED CAUTION ABOUT DRIVING A CAR WITH BOTH OF THE THINGS INSERTED APPLIES EVEN MORE STRONGLY. THESE THINGS ARE GREAT WHEN PILOTING A SINGLE ENGINE AIRPLANE WHICH HAS CLOSE TO 100 DB OF NOISE IN THE FRONT SEAT BUT THEY ARE A BIG ZERO WHEN PILOTING A FOUR WHEELER IN CLOSE PROXIMITY OF DUMP TRUCKS, 18 WHEELERS AND DOLTS OF THE ROAD. REDUCTION IN BACKGROUND SOUND IS SO GREAT THAT PASSENGERS ARE HARDLY ABLE TO SHOUT LOUD ENOUGH TO ASK ME WHY WE ARE FLYING UPSIDE DOWN. SUBSTITUTION OF ONE OF THE EARPLUGS FOR ONE OF THE PLASTIC EARMOLDS MAKES NORMAL CONVERSATION POSSIBLE, WITHOUT REDUCING COMMUNICATION EFFECTIVENESS.

JOE, K5JB

MAIL FOR DEAR JABBY

DEAR JABBY,
BOY DOES YOUR ADVICE STINK. LAST MONTH I WROTE TO YOU ABOUT MY PROBLEM AND YOU TOLD ME TO WASH OUT MY MOUTH WITH GRANDMA'S LYE SOAP. I THOUGHT THAT WAS KIND OF STRANGE BUT OUT OF CURIOSITY I WENT DOWN TO THE ALLEY BEHIND THE BUS STATION LIKE YOU SUGGESTED. SOME GUYS JUMPED ME, THREW A BLANKET OVER MY HEAD AND BUSTED OUT ALL MY TEETH WITH A BRICK. NOW THE PROBLEM IS WORSE. WHEN I TRY TO TALK, IT SOUNDS LIKE A DUCK. NOW I AM REALLY FRUSTRATED. PEOPLE WONT EVEN TALK ABOUT ME, MUCH LESS TALK TO ME. MAKES ME WANT TO BITE MY MICROPHONE, BUT MY GUMS ARE REALLY SORE. FOULED UP BY A ROWDY

DEAR FUBAR
IT WASN'T A BRICK, IT WAS A HT-220. WHAT YOU DON'T SEEM TO UNDERSTAND IS THAT THESE GUYS AREN'T SENSITIVE TO A CASE OF ARRESTED DEVELOPMENT. THEY ARE IGNORING YOU BECAUSE THEY DON'T HAVE ANY SOCIAL CONSCIENCE AND THEY DONT REALIZE THAT YOU NEED ATTENTION TO GET ANY SATISFACTION OUT OF YOUR RADIO. WHAT I SUGGEST IS THAT YOU GET ON A REPEATER WHERE YOU CAN GET EVERYONE TO TALKING ABOUT YOU. TRY THE ONE ON 148.38/.88. SORRY ABOUT THE SORE GUMS. THE ONLY ADVICE I HAVE FOR THAT PROBLEM IS TO GO SUCK A MICROPHONE. JABBY

FOR SALE "RIG HERE IS COLLINS". NOW IS YOUR CHANCE TO BE ABLE TO MAKE THIS FAMOUS ANNOUNCEMENT. COLLINS KWM-2, OUTBOARD VFO, POWER SUPPLY, AND 30L-1 AMPLIFIER. IF YOU THINK YOU ARE READY FOR FIRST CLASS EQUIPMENT, OR IF YOU JUST WANT TO FIND OUT, CALL KEN, WB5ECJ, 751-4917 AND DISCUSS IT WITH HIM. IT'S WORTH THE CALL JUST TO GET TO MEET A COLLINS OWNER ANYWAY.

Chuck, WB5MJS
Bob, N5AIP
Paul, WD5BBO
Mike, W5VXU
Brian, KA5KTF

Loren, WA5CBF
Dwight, WB5KRH
Phil, K9PNT
Elmo, KA5KML
Dennis, KB2FW

Keith, WA5ZFI
Deanna, WB5UMH
A.L., WA5MCR
Ralph, WD5BBV

Mike, W5VXU, mentioned the annual rattlesnake hunt at Mangum as another event where the club could possibly generate some amateur radio activity. He and Bob, N5AIP, are investigating the possibilities of either direct involvement in the hunt, or setting up a "DXpedition" and offering some form of special QSL or certificate commemorating the snake hunt.

The final event of the evening was a 35mm slide show on the Wichita Falls tornado. MSgt Roy Morrison of the Altus AFB disaster preparedness office showed the slides, and afterwards fielded numerous questions on severe weather, shelters, etc. The next regular meeting will be on March 12th, also at the fire station.

LAST-MINUTE NEWS ON THE MANGUM RATTLESNAKE DERBY:

The C&E press deadline is here, but here's also the latest word on plans for the snake roundup. Mike, W5VXU, has come up with a nifty QSL design and just about has the printing coordinated. Bob, N5AIP, has obtained space (just about in the middle of town) to set up a couple of rigs. Tentative plans are to set up early on April 25th (the second day of the event), with Mike and Bob working mainly in the lower end of the General portion of each HF band. If C&E press schedules allow, more details will be in the next (April) issue.

Dennis, KB2FW



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5-10



Well, our first bi-monthly dinner meeting turned out to be a big success. It was held on February 6, at the Choctaw Restaurant. There was a total of 27 adults and 10 children, which makes a grand total of 37 persons present. We all enjoyed a good meal ranging from Mexican to America's favorite, hamburger and french fries. Everyone arrived around 7:00, and were escorted to a private room. We made our selections and then visited for the rest of the evening.

We added a new family to our club this month. They were Jack Cope, WD5HNO, his wife Vicky, and their two children. Jack holds a Tech. class license. He and his family live in Harrah. Welcome to the club, Jack, Vicky and the harmonics.

A hat was passed around to take donations for flowers for George Holt, W5DDI. He will be missed by everyone.

The next meeting will be March 16 at 7:00 PM at the Choctaw City Hall. Everyone is welcome - and bring a friend. Look in next months C&E for the date and place of the next dinner meeting. Can't think of anything else to say, except 73 till next month. Syrena, N5BEP

On February 5, 1981, God added a new flower to his bouquet. This flower has been loved by every person who came into contact with it. The color of this flower can brighten any day. It's aroma is the sweetest ever. The memory of this flower will remain in our hearts forever. There it will never die, but will continue to flourish and live.

As you know, this flower is George Holt, W5DDI. We will all miss him but will never forget his friendly voice or the countless things he has done to help anyone he could.

God has truly added a beautiful new flower to his bouquet.

Syrena, N5BEP

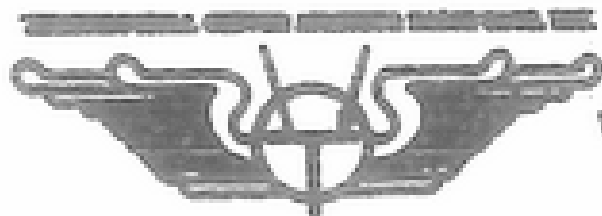
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DAYTON HAMVENTION: Anyone interested in going by private plane? Leave early Friday morning (first light) 24 April, return Sunday afternoon. Estimated cost per person is \$120 round trip. Other expenses can also be shared (ie; room, car, etc.). Call me at work, 7 am-3 pm (405) 734-9437 M-F: or weekends at home (405) 721-6277. Dick Cohen, K6DBR.

FOR SALE: Yaesu FT-202R HT w/speaker-mic & crystals, \$145. Mirage B108 80 watt, FM/SSB, 2 meter amplifier, \$120. Wilson 7-element 2 meter beam, unused, \$15. Realistic VHF/UHF 8-channel scanner, crystals, \$60 Call Chris, KB5QU, days 325-6502, evenings, 364-3848.

FOR SALE 432Mhz Station-- JANEL solid state converter, two 48 element J-Slot multi-beam with stacking harness, 2meters to 432 Mhz VARACTOR Tripler (MMv-432), 2 meter CW exciter plus new low loss CCTV cable, all for only \$200--Call TOM, K8JRM at 672-8338.

FOR SALE--50 Mhz Package-- Clegg Venus SSB/CW Transceiver with power supply, Clegg Apollo linear Amp (600 Watts DC input), and 5 element Cushcraft beam for \$350. Call TOM, K8JRM 672-8338.



WSPAA

EDITOR: Bob Graham, WB5NSV 677-8685

RANDOM WORDS FROM THE PRESIDENT:

THE FEB. MEETING OF ACARC WAS ATTEENDED BY BETTER THAN 40 MEMBERS AND GUEST. THE PROGRAM WAS PRESENTED BY MIKE SALEM, NSMS, AND WAS ONE OF THE BEST WE HAVE HAD IN QUITE A WHILE, THANKS MIKE FOR YOUR TIME, AND I HOPE YOU WILL COME BACK AGAIN..

REMBER NEXT MONTHS MEETING WILL BE ON THE 13TH OF MARCH AT 8:00 PM THE PROGRAM WILL BE PRESENTED BY MR. RICHARD MITCHEM, WHO IS A STAFF METEOROLOGIST FROM NOAA, NATIONAL WEATHER SERVICE. MR. MITCHEM IS ASSIGNED TO THE AERONAUTICAL CENTER, WHERE HE IS AN INSTRUCTOR. WE ARE LOOKING FORWARD TO HIS PROGRAM ON DOPPLER WEATHER RADAR'S, KNOWN AS "NEXRAD", HE WILL ALSO DISCUSS "THUNDER STORM STRUCTURES, AND WILL BE ABLE TO ANSWER QUESTIONS ON SEVERE WEATHER. SO EVERYONE COME ON OUT AND JOIN US.

HAM HOLIDAY:81: WILL BE HERE BEFORE YOU KNOW IT, SO BE READY TO HELP US MAKE THIS HAM HOLIDAY THE BEST YET. OUR LADIES PROGRAM COMITTEE WILL HAVE A MEETING A WEEK OR SO AFTER THE NEXT CORA MEETING... REMBER NEXT CLUB MEETING 13 MARCH...

73, BOB, WA5CJG

CABLE TV CONVERTOR TEST: IF YOUR AREA IS SERVICED BY CATV AND THEY ARE RUNNING PROGRAMMING ON CHANNEL 18 142 TO 148 MHZ YOU MAY HAVE TROUBLE USING YOUR TALKIE IN THE HOUSE. THE CITY I LIVE IN HAS A SPORTS CHANNEL ON 18, AND I CONDUCTED SOME TEST TO SEE HOW MUCH MY WIL SON WOULD INTER FER WITH THE CATV SIGNAL, I PUT MY TALKIE IN THE ONE WATT POSITION AND SAT IN MY EASY CHAIR, AND KEYED UP YOU KNOW WHAT HAPPENED TO THE TV, WELL IT BLANKED OUT SO I TRYED ALL 6 CHANNELS ON MY RADIO AND ALL 6 OF THEM CAUSED THE SAME PROBLEM. I THEN TRIED MY 22S ON THE OUTSIDE ANTENNA, JUST A LITTLE INTERFERENCE, THEN I CONNECTED THE 22S TO A GROUND PLANE DOWN LOW ON MY TOWER AND KEYED UP, TV BLANK AGAIN.. YOU KNOW THE CATV CONVERTORS USED AT THE PRESENT TIME HAVE VERY LOW SENS. WHICH IS A GOOD THING BUT SOME OF THE TV MFG'S. IS ARE BUILDING TV SETS WITH THESE CATV CONVERTORS BUILT IN, I DON'T HAVE THE SPEC'S ON THEIR FRONT ENDS, JUST THING IF THEIR SENSIVITY IS AS GOOD AS A NORMAL TV, THEN EVERYBODY AROUND YOU WILL BE ABLE TO RECEIVE YOUR SIGNAL AND I AM SURE THEY ARE REALLY GONING TO LIKE YOU FOR GETTING INTO THEIR TV, LET ME ASK YOU THIS QUESTION DO YOU THINK YOU WILL BE ABLE TO WORK 2 METERS IF THIS HAPPENS TO YOU????

BOB, WA5CJG

FOR SALE: Transmitting type 72-ohm twinlead. Will handle a full KW easily. \$10.00 a hundred feet. W5JJ, (405) 789-3788.

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MINUTES OF THE FEBRUARY MEETING OF THE ACARC

The meeting was called to order at 8:00PM by President Bob Pace, WA5CJG. There was an excellent crowd present, and the usual self-introductions kicked things off. Bob then asked for reports from the various committees and officials. A brief summary follows:

CORA REPORT-was given by Frank Yohe, N5CIJ, who reported that a tentative budget had been arrived at for Ham Holiday '81. Frank further reported that it is now official, Ham Holiday '81 will be the West Gulf Division Convention for 1981. Frank also reported that Bob Graham, WB5NSV, is now accepting bids on our old computer printer, on behalf of CORA. For more information on this contact Bob.

REPEATER REPORT-was given by President Pace. He reported that the repeater is doing fine and asked that everyone please knock on wood!

STATION REPORT-was given by George Lagaly, W5NTL, who reported that the clubs TR-4CW still has an intermittent problem, but we will have to live with it for now.

COMPUTER REPORT-was given by Bob Graham, WB5NSV, who reported that we now have a new TI-820 printer complete with all the goodies. He also announced that sealed bids for the old printer will be opened at the next ACARC meeting.

At this point President Pace auctioned off last years Call Books. Thanks to Mark Lewand, KB5IT, and Rob Runyon, AA0Q, for donating their old books for auction as well.

The program for the evening was presented by Mike Salem, N5MS, on the wording of the new "Plain Language" regulations. This was an excellent program, and if you missed it, you blew it!

Meeting was adjourned at 9:37PM for coffee and donuts.

73, Bob, WB5NSV, Sec.

THE WAVE OF THE FUTURE

December, 1980, Amateur Radio, available in the ACARC clubroom, has an extensive write-up on the Palomar Electronics Corp. (not to be confused with the Palomar Engineering outfit) model PTR 130 K transceiver. This little jewel, and it's truly little, has a continuous sending and receiving frequency range between 100 KHz and 30 MHz on CW, "AM" (6A3), "SSB" (3A3J), and FM. Not only split-frequency in-band but split-band operation is possible, with a power output between 44 and 96 watts. There are many, many other goodies, too, but read about them in Amateur Radio.

While you're reading the December issue, take a look at the article on making a 432-MHz helical antenna for satellite communication.

W5JJ

MORE FUTURE WAVES

According to a series of articles in MOBILE TIMES narrow-band SSB is the coming mode for business communications, requiring only 5 KHz for channel separation.

W5JJ

EDITORIAL COMMENT

"NAH SUH WE AINT GOT NO ENGLISH NOHOW"

Any person who has listened to conversations on the several Amateur Radiotelephone bands will need no explanation of the title! For reasons known only to the users, a certain portion of radiotelephone operators choose to use a style of language that reflects sorely upon the whole institution of Amateur Radio.

Perhaps this is to be expected, considering that a majority of newly-licensed radiotelephone operators are emigres from the Citizens Band. On that band it appears to be obligatory to use a style of speech normally associated with the ignorant and illiterate.....the more illiterate, the more highly it's valued.

Noting the "hams" on the Amateur Radiotelephone frequencies often violate even the simplest fundamentals of our language leads one to conclude the desecrations are deliberate. Why?

Indeed, why? Can it be an effort to "live up" to the pejorative epithet "ham"? To act the part of an ignorant, bombastic, illiterate jackass just because some persons equate "Radio Amateur" and "ham"?

Whatever the reason may be, these "hams," by their conduct, bring disgrace and dishonor upon Amateur Radio.

You want a further definition of "ham"? Just set up this equality: "ham" is to Amateur Radio as "nigger" is to Negro, as "greaser" is to Mexican, as "wop" is to Italian, as "dago" is to Greek, as "bohunk" is to Hungarian.....etc. etc.

W5JJ

MOBILE ANTENNAS. HOW CALLS ARE ASSIGNED

How's that for a dual and totally unrelated set of titles? Each concerns an article in the Nov. 80 issue of Amateur Radio, available in the ACARC clubroom. Each is well worth your reading. You may not be interested in an antenna for mobile use in the frequency range from 3.5 to 146 Mhz, but most of us have wondered about just how call signs get issued to not only amateur but also commercial radio stations throughout the world.

While on the general subject of antennas, Technical Topics section of the Dec. issue of Radio Communication (also in the ACARC clubroom) gives a wee look at a newly-marketed low-height antenna. Related to the loop, it's a transmitting antenna that's not too much inferior to a dipole.....maybe better, if you consider height above ground. It's expensive, of course, unless you build your own.....and that's not totally a lost art!

W5JJ

REQUIESCAT IN PACE

The world in general and Amateur Radio in particular lost one of its outstanding citizens when George Holt, W5DDI, became a Silent Key. George was a gentleman in the true sense of that oft-abused term. He became a leader in whatever activity he engaged in, not just a leader, but the unique person who could be depended upon to ensure that any activity undertaken would be carried to a successful conclusion. George will be missed on the air, in the IEEE, in the QCWA, and in the many other walks of life that he ennobled by his participation.

Dominus vobiscum, George!



EDITOR: N5IH

There must be some sort of problem with the master planning of meetings. This makes two months in a row that our meeting actually came before paste-up. Makes things a little easier to wright about.

There is not much to wright for all that were at the meeting, except I do not believe there was a single person that did not enjoy themselves. As I am sure all know, but just in case, the February meeting was the annual weather meeting held at channel 9 TV studio. Gary England did his usuall fine job, along with his two midgets. Hobe (WB5MLN), and Chuck (K5NK) conducted a very good session and meeting. The films, and the slides were better than I remember them being in the past years. And, to Hobe's surprise Gary did not show the slides he (Hobe) had taken of a real life textbook funnel, so things went very smooth.

Along with everything else, Buddy (KA5AQY), and Larry (WB5NYX) put on a demonstration of the sub-audible tone that has been placed on the 22-82 machine, no the hum on the squelch tail is not from that!, and how the entire system will work. Let's see now, how did that go again? Oh yes, the tone will be turned on when the weather net is in session, so those that want to sleep when it is not can do so and then be awakened by some idiot calling for check-ins. (no comment needed Leonard!) This will allow those wanting to chit-chat while waiting for the severe weather to roll in to do so, and the folks with the de-coder on their equipment can sleep, watch HBO, or do whatever people do. AND, not worry about missing any severe weather. Boy, where has that thing been all this time??? Maybe now we might even feel like going to work the next day. THANK YOU LARRY (and the rest of the gang) By the way, Buddy says the entire de-coder kit (complete) will run only \$5, (was going to have them available at the meeting, but they were not quite ready) for club members, and \$10 for non-club members. Non club members can pick them up at Kryder's on North MacArthur. Members get yours from Buddy, Larry, or the President.

It appears that the net check-in proceeedures will be the same as in the past. The radar team will be spearheaded by Bob robert (WA5BQX), with help from Ken (WD5HXK) and I think that maybe Lloyd may even be talked into helping again. The net control team will be headed by the very lovable Henry (N5IH), with help from George (AD1S), MAC (K2GKK), and Zack (WB5QPI). So, it appears that not many changes have taken place over the last year.

Oh, by the way, the final tally as to how many were in attendance at the weather meeting came to exactly 215, give or take a few.

The next regular meeting will be held March 17th at the fire training center, at which time Reuben (WD5FKF) assures us the heliax may even be in. It IS ordered!!!!

For Sale: Icom IC230, synthesized 2 metre rig. There is also a KLM 10-140B (10 watts in for 140 watts out) 2 metre amplifier. Both ready to go and priced to sell at only \$150 each. Call Mark Adams (WA5REC) at 348-7847.

RTTY FOR SALE: This is not junk! One month old Xitex UDT170 demod-mod, and Xitex SKT and SCT keyboard. Sends, and copies RTTY-MORSE-ASCII. This thing sends like a dream and tunes in extremely easy Call Henry N5IH 722-3848 \$800 in warranty



***** OKDX *****

The regular meeting of the OKDX group was held February 9th at the Colony Kitchen on North MacArthur. I am sorry but I do not have the entire list of every-one there since yours truly was not in attendance. However, I have been informed that with the exception of the food, the meeting was a good one. John Young (WD5FXP) had some typed sheets as to what DX was expected up during the month and everyone got a copy for themselves. For those that don't know it John spends a great deal of time listening to different frequencies to obtain this information for us, so, thank you John.

The next meeting will be held on March 9th at the same location. If the food does not meet with satisfaction from the group we will select a new meeting place. So, you might want to check around for some other spot just in case.

It appears that most of the DX that John told us about showed. The one exception was the group to 4W,70, and other places. You can quit looking for the whole trip was scratched. There has been a lot of good stuff up tho, so I hope that you are getting your fair share.

By this time the DX CW contest is history. There is always lots of countries on that do not regularly come up, so again I hope you got your share, and don't forget the SSB portion of the contest coming up soon. Lots of good ones show up there also!!!

I am sure that you all know (maybe even seen) by now mister SW's new toys. That 60 foot tower with the 4 element 40 and the tri-bande above really stand out over the roofs of Bluff Creek. Yes, that is right 4 elements on 40 metres. Chuck the entire system looks F*A*N*T*A*S*T*I*C. The only problem is that you have made John very envious. Hang in there John

As far as new ones this month the main concern is for Jim Smith to make his planned destination. You know HEARD. If this one makes it all the others will seem blah. Lets all get this one for sure. Another that a lot of us needs is Auckland. Look for ZL3AFH/A around 14.138 at 0950z, he has a sched and will work state-side cross mode. There is two other ones that you should be aware of. These are Burundi, and Tristan da Cunha. Look for 9U5JM (this is a good one by the way) Saturdays, 1700z at 21.280. The 2D9 should be up by the end of March, maybe all bands.

John, is it true that you are still not sure which side-band to put the receiver in when trying to work cw?? Then why did it take you so long to work some-one in the CW contest??? We are all glad that it has happened to some-one else. Alas, it is good that you were on 147.900 and got ahold of MAC. So, Mac, John thanks you!!

By the way guys, we all best watch out for George. He has a 40 metre beam up and plans on working all the DX, so we better hurry and work our share before he gets it all. I suppose what George doesn't work Guy will. Guy now has multi-multi element yagi's at about 2 miles up on ALL bands except 75, and he has a collinear there. How much longer till he makes 7KW look like a school girl???

GOOD LUCK and GOOD DX

March 1981

MULTIPOINT DISTRIBUTION SYSTEM DO'S AND DONT'S--ONLY THE GOVERNMENT KNOWS FOR SURE (Part II, wherein it is asserted that no one can tell the players with or without a program)

When last we left our intrepid searchers into the ins and outs of the Federal wiretapping statutes, the local United States Attorney had just issued a letter that stated that persons who intercepted transmissions of the local MDS service would be prosecuted under a statute enacted in 1968 to control illegal interception of wire and oral communications. In part II, we are just beginning to examine the statutes involved.

Remember, all that glitters is not gold and remember what Will Rogers said about his jokes. When he makes a joke, everybody laughs, but when Congress makes a joke, it's a law. In this instance, a literal interpretation of the law is a joke and as one Court says leads to an absurdity.

First, let me say that I have read all of the applicable statutes cited by John Osgood in his letter, plus spent quite a bit of time reading several cases (including a couple that I will mention later). I also sortied through the entire legislative history of the Act and the Senate report filed by the Congress when the wiretap act was passed as Title III of the Omnibus Crime Control Act of 1968. I also checked every amendment since 1968 and their legislative history and have yet to find any mention that the Act was intended to protect a copyrighted work transmitted one-way by a pseudo pay TV system by imposing a \$10,000.00 fine and a 5 year imprisonment term. There is, however, extensive recitation that discusses the problems that have arisen with regard to illegal wiretapping and the interception of oral conversations. For example, in the findings of Congress presented in the preamble of the Act, Congress stated:

There has been extensive wiretapping carried on without legal sanctions, and without the consent of any of the parties to the conversation. Electronic, mechanical, and other intercepting devices are being used to overhear oral conversations made in private, without the consent of any of the parties to such communications. The contents of these communications and evidence derived therefrom are being used by public and private parties as evidence in court and administrative proceedings . . .

In order to protect effectively the privacy of wire and oral communications, to protect the integrity of court and administrative proceedings, and to prevent the obstruction of interstate commerce, it is necessary for Congress to define on a uniform basis the circumstances and conditions under which the interception of wire and oral communications may be authorized, to prohibit any unauthorized interception of such communications, and the use of the contents thereof in evidence in courts and administrative proceedings.

To safeguard the privacy of innocent person, the interception of wire or oral communications where none of the parties to the communications has consented to the interception should be allowed only when authorized by a court of competent jurisdiction and should remain under the control and supervision of the authorizing court.

U. S. Code Congressional and
Administrative News, 1968, 2nd Session
p. 253

It is clear that the single issue or group of issues of most concern to the Congress were the "wiretap" happy persons who (including public officials) would drop a phone tap at the drop of a hat. Because of a patchwork nonuniform plethora of state laws, the legality of wiretapping varied widely from state to state. The Congress, in its infinite wisdom (not really a bad idea since much of the wiretapping going on was done by police officials without warrants) decided to legislate in the field and shut down what constituted an obvious breach of privacy. The problem in its present form with MDS operations is that Congress chose to define wire communications in terms of transmissions over a "wire common carrier." This inclusion of common carrier could also take in other common carriers such as MDS, even though they are entirely radio common carriers.

One certain irony is that properly licensed pay tv stations do not have the same protection as their poor boy MDS competitors if this interpretation is allowed to stand. Pay TV people such as Channel 43 must contend with the ever confusing language of Section 605 and under some interpretations, even that is not much help. Channel 43 takes the technological way out by encoding their signal so cleverly that one would need a full time programmer to figure out what they are doing.

The Definitions of what we are talking about are found in Title 18 United States Code, Section 2510:

§ 2510. Definitions

As used in this chapter [18 USCS §§ 2510 et seq.]—

- (1) "wire communication" means any communication made in whole or in part through the use of facilities for the transmission of communications by the aid of wire, cable, or other like connection between the point of origin and the point of reception furnished or operated by any person engaged as a common carrier in providing or operating such facilities for the transmission of interstate or foreign communications;
- (2) "oral communication" means any oral communication uttered by a person exhibiting an expectation that such communication is not subject to interception under circumstances justifying such expectation;
- (4) "intercept" means the aural acquisition of the contents of any wire or oral communication through the use of any electronic, mechanical, or other device.
- (5) "electronic, mechanical, or other device" means any device or apparatus which can be used to intercept a wire or oral communication other than—
 - (a) any telephone or telegraph instrument, equipment or facility, or any component thereof, (i) furnished to the subscriber or user by a communications common carrier in the ordinary course of its business and being used by the subscriber or user in the ordinary course of its business; or (ii) being used by a communications common carrier in the ordinary course of its business, or by an investigative or law enforcement officer in the ordinary course of his duties;
 - (b) a hearing aid or similar device being used to correct subnormal hearing to not better than normal;
- (6) "person" means any employee, or agent of the United States or any State or political subdivision thereof, and any individual, partnership, association, joint stock company, trust, or corporation;
- (8) "contents," when used with respect to any wire or oral communication, includes any information concerning the identity of the parties to such communication or the existence, substance, purport, or meaning of that communication;
- (10) "communication common carrier" shall have the same meaning which is given the term "common carrier" by section 153(h) of title 47 of the United States Code [47 USCS § 153(h)]; and
- (11) "aggrieved person" means a person who was a party to any intercepted wire or oral communication or a person against whom the interception was directed.

(Added June 19, 1968, P. L. 90-351, Title III, § 802, 82 Stat. 212.)

Please note the following "hickies" in the morass. "Intercept" under paragraph 4 refers only to the aural acquisition of the contents of a wire and oral communications. What about video? Maybe not. Would a gifted lipreader be exempt? Who knows, but it points to the Congressional intent to protect private conversations and wire communications, not pay TV transmissions.

Note that a "wire communications" requires a wire somewhere along the transmission path operated by a common carrier (that is, assuming that a radio could not be a "like connection" which appears to be unlikely) and there also appears to be a requirement that the common carrier have an "interstate or foreign communications" capability even though the intercepted signal does not go interstate. It seems to be not necessary that the signal be transmitted interstate, just that the common carrier has interstate capability. TVQ could be interstate in nature when you consider that the HBO signal comes interstate via a satellite common carrier. But the individual station off of which the signal is intercepted does not interstate capability and is an individual organization. One thing is for certain and that is the fact there must be a "wire, cable or like connection" (operated as a common carrier) somewhere in the link. If TVQ uses no wire, cable, or like connection as a common carrier somewhere in their scheme of transmission from New York, it would again appear the the prosecutor's argument might fail and the interception of a radio transmission would then (in my opinion) be only subject to the strictures of Section 605 (the Secrecy Provision) of Title 47.

Another problem that arises with this concept of radio common carriers interception is that how could a person who intercepts a transmission have notice that there is an actual wire common carrier along the line. It is axiomatic that a criminal law is strictly construed (that is, it must be strictly limited to what is in the statute and cannot, except in most ordinary circumstances be read to expand duties or requirements of people accused of crime. A law must give notice of the conduct that is intended to be prohibited. Section 2511 (which defines the prohibition for interception of wire or oral communications) requires a willful intent on the part of the person who seeks to intercept, ignorance of the fact that a radio transmission that is intercepted has a wire transmission by a common carrier could act as a defense to the charge of interception.

Note also that an oral communications must have an "expectation that such communications is not subject to interception under circumstances justifying such expectations". Huh? Actually, this double speak means that any person who makes an oral statement with a reasonable expectation of privacy (i. e. in his house, in a private room, under a bushel basket) has a protected right not to have his oral conversation intercepted. An oral conversation conducted in a large crowd in a loud voice may not have such an expectation. As we shall see, at least one court has said that a radio transmission qualifies as an oral conversation and that under certain circumstances is subject to being overheard without much of an expectation of privacy.

Definitions are fun, but the heart of this controversy is contained in §2511 as follows:

§ 2511. Interception and disclosure of wire or oral communications prohibited

(1) Except as otherwise specifically provided in this chapter [18 USCS §§ 2510 et seq.] any person who—

- (a) willfully intercepts, endeavors to intercept, or procures any other person to intercept or endeavor to intercept, any wire or oral communication;

(b) willfully uses, endeavors to use, or procures any other person to use or endeavor to use any electronic, mechanical, or other device to intercept any oral communication when—

- (i) such device is affixed to, or otherwise transmits a signal through, a wire, cable, or other like connection used in wire communication; or
 - (ii) such device transmits communications by radio, or interferes with the transmission of such communication; or
 - (iii) such person knows, or has reason to know, that such device or any component thereof has been sent through the mail or transported in interstate or foreign commerce; or
 - (iv) such use or endeavor to use (A) takes place on the premises of any business or other commercial establishment the operations of which affect interstate or foreign commerce; or (B) obtains or is for the purpose of obtaining information relating to the operations of any business or other commercial establishment the operations of which affect interstate or foreign commerce; or
 - (v) such person acts in the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States;
- (c) willfully discloses, or endeavors to disclose, to any other person the contents of any wire or oral communication, knowing or having reason to know that the information was obtained through the interception of a wire or oral communication in violation of this subsection; or
- (d) willfully uses, or endeavors to use, the contents of any wire or oral communication, knowing or having reason to know that the information was obtained through the interception of a wire or oral communication in violation of this subsection;

shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

(2)(a)(i) It shall not be unlawful under this chapter [18 USCS §§ 2510 et seq.] for an operator of a switchboard, or an officer, employee, or agent of any communication common carrier, whose facilities are used in the transmission of a wire communication, to intercept, disclose, or use that communication in the normal course of his employment while engaged in any activity which is a necessary incident to the rendition of his service or to the protection of the rights or property of the carrier of such communication: Provided, That said communication common carriers shall not utilize service observing or random monitoring except for mechanical or service quality control checks.

(d) It shall not be unlawful under this chapter [18 USCS §§ 2510 et seq.] for a person not acting under color of law to intercept a wire or oral communication where such person is a party to the communication or where one of the parties to the communication has given prior consent to such interception unless such communication is intercepted for the purpose of committing any criminal or tortious act in violation of the Constitution or laws of the United States or of any State or for the purpose of committing any other injurious act.

Excerpts 18 U.S.C. §2511

Subsection (1) (a) makes interception of any wire communication (carried by a common carrier) and any oral communication (with an expectation of privacy) illegal. There is a difference here from the provisions of Section 605 of Title 47 (the so-called secrecy clause) which prohibits interception and disclosure of wire or radio communications in interstate or foreign communications. Obviously, §2511 covers a larger variety of communications (wire or oral communications) of a specific nature (transmitted by a common carrier for a wire communication and oral communications with a reasonable expectation of privacy). There is a consideration here perhaps that inadvertent reception of radio signals (unless they are part of a wire communications transmitted at some point by a common carrier) could be inadvertent and we will not punish interception, but interception and divulgence.

Disclosure or an attempt to disclose the contents of a wire or oral communication knowing or having a reason to know that the information was obtained through interception is prohibited under (1) (c). Note that (1)(b) would punish an actual use of electronic, mechanical, or other device to intercept an oral communication, but would also punish an attempt to use any such devices. This would be the same whether or not an actual interception ever took place.

It is also ironic to note that under (2)(a)(i) that if you apply this section to a MDS station that employees of the MDS operator cannot even watch the program except under specific circumstances.

Also, I think it clever to note that (d) is an exception to the illegality of interception if you have the permission of one of the parties to the communications. Does this mean that one could avoid the criminal liability (but not the civil copyright liability) by obtaining permission to intercept from a friendly who is a subscriber? Maybe not since the exception does not apply if the interception is made for the purpose of committing a criminal or tortious act. Since the interception of a MDS signal does give rise to civil damages for copyright, the exception may not apply if this is considered to be a tortious act.

Do these statutes apply to MDS transmissions as a radio common carrier? As I stated last month, who knows and who can afford to defend themselves in a criminal prosecution to find out. The obvious answer is that Congress never contemplated protecting MDS operators in particular and radio common carriers in general. It applies to wire common carriers, not radio common carriers (unless such radio common carrier communication is made under circumstances where there is a reasonable expectation of privacy since one court has analogized a radio transmission to an oral communication).

The findings listed at the first of this article make it clear that radio common carriers were not contemplated. Further investigation of the legislative history sheds some additional light on the purpose of the legislation:

Title III has its dual purpose (1) protecting the privacy of wire and oral communications, and (2) delineating on a uniform basis the circumstances and conditions under which the interception of wire and oral communications may be authorized.

Congressional News, p. 2153

The legislative history deals with a wide range of various state statutes which were outlawed by Title III, none of which dealt with the interception of pay tv signals. In the legislative history that deals with a section by section comment of the statute, the nature of the information intercepted is found to meet a certain criteria of "necessity of privacy." (My quotation marks) :

Subparagraph (c) and (d) prohibit . . . the disclosure or use of the contents of any intercepted communications by an person knowing or having reason to know the information was obtained through an interception in violation of this section. The disclosure of the contents of an intercepted communication that has already become "public information" or "common knowledge" would not be prohibited.

Congressional News, p. 2181

If you disclosed a movie, already released to a commercial theatre, would that be considered to be "common knowledge" or "public information." ?? Don't know. In the first place, this section would only apply to someone who receive information from someone who intercepted it. If it is a protected

communications under the statute, the person who intercepted it has already violated the law. He then passes it to another person who also further discloses it. Both could be charged with a criminal act. This issue of "public knowledge" would probably be a question of fact for the jury to decide.

There is only one case that appears to address the question of radio transmissions directly and it involved three Arizona men who discussed various marijuana transactions over their radiotelephones. They, however, were unaware that a local housewife with a VHF scanner was carefully monitoring their conversations over a period of a couple of months. If the evidence that was obtained as a result of those overheard conversations or was a "fruit" of those overheard conversations had been excluded, no conviction would have been obtained since there was apparently no independent evidence of their criminal activities.

The Court was in a quandary and spent quite a bit of time scratching its head about whether or not Section 605 (secrecy provision) was applicable. They finally concluded that it was not since the interception of conversations that appeared on a mobile telephone was done by law enforcement officers. Remember that the defense attorneys were trying to get the interception declared illegal and have any evidence that flowed from the interception thrown out of court.

Since the Court concluded that Section 605 did not apply, then the radio transmission would have to be either a "wire" or "oral" communication under Title III. The Court decided that a radio transmission was analagous to an oral communications since the use of a radio transmitter was just like using a megaphone. As such, there would have to a reasonable expectation of privacy for interception to be illegal. This expectation may not be defined only in terms of what the parties to the communications expect, but rather is a condition to be determined based on all the circumstances of the communications. Oral conversations are generally subject to being overheard by the casual bystander. This is what happened in this case. The housewife overheard the conversation with a common ordinary receiver that was readily available and commercially sold. Although there are statutes under Title III that prohibit the manufacture, distribution, possession, and advertising or wire or oral communications interception devices (18 U.S.C §2512), the radio receiver of the housewife did not fit in the categories of that statute. Likewise, I suppose that an amateur radio operator who has a legal and legitimate use for a particular receiver might help destroy this reasonable expectation of privacy.

So if a radio transmission is an oral conversation as defined by the Court, how do you establish an expectation of privacy? This is a difficult concept as the Court pointed out:

Broadcasting communications into the air by radio waves is more analogous to carrying on an oral communication in a loud voice or with a megaphone than it is to the privacy afforded by a wire. As with any broadcast into the air, the invitation to listen is afforded to all those who can hear. In the instant case, the eavesdroppers merely tuned their radio receivers to the proper station. It is more obvious that conversations initiated from a radio-telephone more logically fall within the category of "oral communications."

U.S. v. Hall, 488 F.2d 193, at 197

The Court further states that there must be a "justifiable reliance" on the expectation of privacy before the statute would apply. But this is not the real can of worms. While it may be conceded that a person who makes a radio transmission does so at his own risk of being overheard, what happens

if the radio communications is interfaced to a wire common carrier? Since wire communications over a common carrier are protected absolutely under §2511 (1)(a), the expectation of privacy would not apply and the interception becomes absolutely illegal. A transmission that travels partially by wire and partially by radio is a wire and not an oral communication. So a transmission made completely by radio may or not be protected from interception depending upon the expectation of privacy and a transmission made partially by radio and partially by wire common carrier would be protected absolutely. Judge Wallace discussed this absurd result:

We realize that our classification of a conversation between a mobile and land-line telephone as a wire communication produces what appears to be an absurd result. These conversations were intercepted by an ordinary radio receiver and not by a phone tap. Logically, they should be afforded no more protection than those occurring between two radio transceivers. They should be oral communications. However, Congress' definition of a wire communication necessitates this conclusion.

This is especially ironic since Title III of the Crime Control Act contains stringent civil and criminal penalties for those who violate its provisions. In other words, any citizen who listens to a mobile telephone band does so at his own risk, and scores of mariners who listen to the ship-to-shore frequency, commonly used to call to a land-line telephone, commits criminal acts.

U.S. v. Hall, at p. 197

Judge, have I got news for you. If this is true, anytime an amateur transmitter is connected to a phone line, it then becomes a wire communication and subject to absolute protection of a wire communications. This is Excedrin headache no. 73 and a whole host of amateur radio operators who listen to autopatch calls could become criminals subject to a \$10,000.00 fine and 5 years imprisonment. Now that's an absurd result.

The upshot is that Congress, just like Will Rogers said, has made a joke. In this instance, they have attempted to legislate a good concept, that is, the protection of each of our privacy, and have ended up turning innocent amateur radio operators into criminals. As to our friends at the local MDS outfit, they are not entitled to absolute protection from interception unless they are a wire common carrier or have a part of their transmission carried by a wire common carrier. A strictly radio common carrier is not entitled to protection unless there is a reasonable expectation of privacy since this is entirely analagous to an oral conversation.

Any person who faces the wrath of TVQ must accept the idea that he or she could be subject to a federal prosecution for what might be thought to be a de minimus transgression. And besides, why does TVQ think that they are entitled to so much protection of their economic interest? More important, why are the resources and facilities of the federal government used to protect what is an entirely private interest? There are civil laws to protect copyright and TVQ and HBO have the right to sue anyone and collect a copyright fee. Several years back, Congress went through all sorts of gyrations to finally issue a criminal law making it illegal for a person to bootleg records and tapes. This was in response to a perceived real problem. However, inadvertant, Congress did not intend to protect MDS operators with such stringent criminal penalties.

Micheal Salem N5MS

CB ANTENNA NEEDED--29.6MHZ OR BUST DEPARTMENT

I need a CB antenna. No, no, not because I want to talk on the CB bands, but because I want to talk on 29.6 MHZ, the national FM calling frequency. And if WA5JXX and myself can throw together some logic and relays in the next couple of months, everybody of the class of license of General or above can talk on 29.6 when we get the remote installed.

This all came about a couple of years ago when WB5UTY, WB5POW and myself went to a Motorola sale in Dallas. Larry, Stan and I picked up a couple of Mocom 10 mobiles for the 30-50 Mhz band. Actually, one of the radios that I got was for the 25-30 Mhz band and needed a tune up to get on frequency. It was butchered a little and had had some parts robbed out of it, but it really didn't matter since I did not get around to tuning it up until a month or so ago. Actually, it took me forever to get around to ordering crystals for the radio and when they finally arrived from International, I sat down and began to examine the radio. The receiver seemed to work OK, but someone had been into the IF with a vengeance. The slugs were loose in the coils and the radio could be quick tuned by just pushing the slug through the coil. Dean Waddell suggested that I put a rubber band in the coil and that helped a little, but I decided to order a complete set of IF coils and discriminator transformer. I also found a couple of transmitter parts missing, including the frequency tuning coil. Someone had also swiped a capacitor out of the oscillator circuit that had me scratching my head for awhile trying to figure out why the radio was 24 khz high all the time. A quick check of the junk box and a coil and IF transplant cured the problem. The transmitter tuned up for 5+watts and the receiver squelch opens at .10 microvolts and has 20 db of quieting at .18 microvolt, way below spec.

What is 29.6Mhz? Well, the Commission allows FM transmissions above 29 megahertz. A number of FM enthusiasts have built up 10 meter FM transceivers and connected them to various VHF and UHF repeaters in remote base operation. All you had to do was dial up the local FM repeater, hit a couple of touchtones and bring up the 10 meter transceiver. You could then talk on 10 meters using your 2 meter walkie talkie.

Once I got the radio, I connected it up to my 75 meter dipole,(ala a suggestion from K5JB) and quintupled it to 10 meters. It actually works quite well and I have made contacts with people all over the east coast. I would now like to get myself a 10 meter groundplane or something so I can have a resonant antenna other than my dummy load. The 10 meter FM band is just like 10 meters normally. When the band is open, it doesn't take much power. I have notice that these wideband signals are subject to some distortion which was suggested to be phase distortion. I don't know. Some signals are clear as a bell and others are muffled like the signal is not getting through the IF filters clearly. I connected up a discriminator and everybody seems to be close on frequency, but it is possible that some people could have bad audio. A lot of people are using converted CB rigs and a lot of these sound very good.

So folks, let me know. Who has a CB groundplane for sale cheap? I also would eventually like to acquire some type of amplifier for this band, preferably solid state. I would even accept a(gulp) CB amplifier and make it an honest amplifier. Give me a call at 321-5453 or 360-1302 and let me know what you have and price.

Micheal Salem N5MS

FCC AMATEUR RADIO RULES TO UNDERGO REWRITE DEPARTMENT

The FCC finally released their "plain language" rewrite of the rules on December 19, 1980 in the Federal Register. I got a copy of them from WA5JXX and have had an opportunity to examine them for a couple of weeks or so.

First, the rules are not intended to be a overhaul of the regulations, but rather a conversion of the previous rules into language that is, hopefully, simpler to understand. There are a few substantive changes and a couple that affect repeater operators that will be very interesting. In the next issue of C & E, I will take a closer look at the rules.

The ARRL has chosen to publish only excerpts of the rules in QST instead of all the operating news, but you can get a copy of the rules by writing the League and sending them a buck. Since one of the changes proposed under the rewrite is to require all amateurs to have a copy of the rules in their station file, I think that it would have been useful if the League had published all the rules in QST. They run over 50 pages in the Federal Register, but they could have been broken up into three or four parts for publication in QST.

Anyway, the rewrite has four parts : Subpart A, Amateur Radio Service (AR Rules); Subpart B, Radio Amateur Civil Emergency Service (RACES Rules); Subpart C, Amateur Satellite Service (ASAT Rules); and Subpart D, Technical Standards (TEC Rules). Each subpart contains the rules for that service, except Subpart D which contains the technical standards for all three services. The Amateur Radio Service will be changed in name to the Amateur Telecommunications Service.

Comments may be filed on or before June 19, 1981, and reply comments (comments on everybody else's comments) must be filed on or before August 19, 1981. Formal comments require an original and five copies of their comments. If you wish each Commissioner to have a copy of your comments, you must file an original and 11 copies. Nothing is wrong with just writing a letter and commenting informally. All comments are given the same consideration, regardless of the number of copies submitted.

Micheal Salem N5MS

A SCRAMBLED TRANSMISSION IS A SCRAMBLED EGG

A hot flash from a friend indicates that somebody up there is using a scrambler to encode various transmissions on the amateur band. Several frequencies appear to be in use and one of the frequencies is 446.5 Mhz, the national calling frequency for simplex. This could be a dangerous precedent since the use of scramblers on the amateur bands is illegal. The transmissions appear to come on frequency and go away with no identification in plain language. The scrambling technique appears to a simple inversion technique which can be easily decoded by simply inverting the incoming signal around a carrier frequency. My source has indicated that he found the signals with his Bearcat 250 and also heard it on 446.5 Mhz. Since the Bearcat has an auxiliary tape recording output control, we are going to rig up a recorder and tape the transmissions, then decode them at our leisure. Whoever is doing this, stop it! You are jeopardizing your amateur license.

Micheal Salem N5MS

See individual club sections for times, places & details.

MARCH '81 HAM HAPPENINGS						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Whatstraw: Watonga, 1 2:30	SKYWARN Red Cross - 7pm - Tri-City, 2 EARC	7pm Kingfisher --- 2 --- 3 Gt. Plus.	MORI DINNER, 4	SKYWARN Guthrie 5	6	7
8	USAF MARS, CARC 9	OU, Shawnee, 10 76ers	11	ATV, Altus 12	ACARC, SCARS 13	clean mkt., 14
EARS 15	ARES 16	OCAPA 17	18	EDIT. C+E; 19 Kay City.	VHF 20	21
22	23	CORA, Shawnee 24	25	MORI mails 26 C+E	27	28
29	30	31				

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