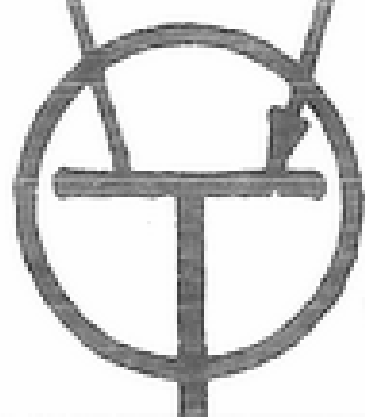


Central Oklahoma Radio Amateurs

COLLECTOR

EMITTER

AND



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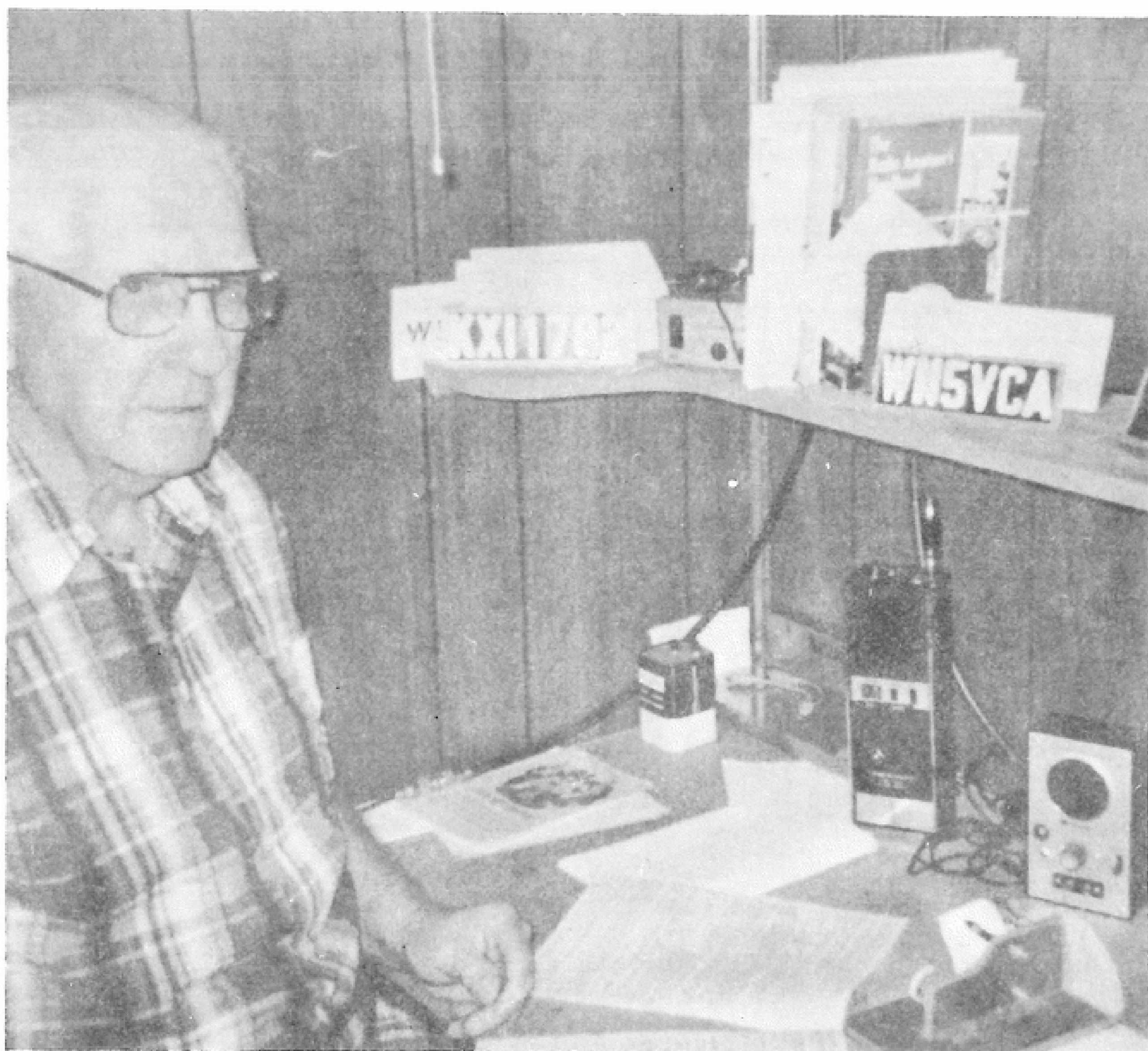
FEBRUARY 1977

VOL 3 No 25

AN INFORMATIVE MAGAZINE
PUBLISHED MONTHLY BY AND
FOR OKLAHOMA RADIO
AMATEURS

AND ANYONE INTERESTED IN
LEARNING ABOUT IT

IT'S NEVER TOO LATE



Eugene Perry, age 80, has just received his new amateur radio license, WN5VCA.

He retired from Tinker AFB and operated a Citizens Band radio as KXI 1782. He decided there was more in life than a CB license offered.

He resides at 5220 N. Miller Place, Okla City, phone 942-1238, and will be happy to hear from any amateurs and especially other Novice. He has just purchased a used Drake TR-4 and needs some assistance on antenna design and installation.

Central Oklahoma Radio Amateurs

COLLECTOR AND EMITTER



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AT OKLAHOMA CITY OK

Managing Editor Joe Harding, WA5ZNF 737-1044

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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PARTICIPATING CLUBS FOR CORA COLLECTOR & EMITTER:

AERONAUTICAL CENTER AMATEUR RADIO CLUB
Poatal Station 18, Okla City OK 73169
MEETS: 8:00 PM First Friday each month
Flight Standards Bldg, FAA Aero Center

Pres Dave Langley K5KDR 329-6333
Assist Lloyd Kirk WB5HUP 685-6555
V-P Bill Hulse W5NI 376-2125
Sec/Tr Robert Runyon W5JES 373-1818

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MEETS: 8:00 PM Tuesday, first full week
in month. Okla City EOC, 4600 N Eastern

Pres Chet Hazelwood W5GDL 427-1439
V-P John Huckaby K5QDR 672-4706
Sec/Tr Richard Zanni WB5FYL 732-6778
Dues: Sid Gerber, 829 E Bouse, MWC, 73110

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202 W Boyd, Room 219, Norman OK 73069
MEETS: 7:30 PM Alternate Tuesday STUDENT
UNION Room 161

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V-P Kenny Hutchison WB5RXZ 364-3001
Sec James Jones WB5RKQ
Treas Mike Salem WA5EPK 321-5453

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MEETS: 3rd Tuesday each month 7:00 PM
AIR National Guard, Will Rogers Airport

Pres Ken Newberry WB5PYN 685-2717
V-P John Oltmans WB5PZG 525-6066
Sec Jim Townsend WB5VCB 632-5445
Treas C Y Chandler WB5TKG 232-9005

OKLAHOMA CENTRAL AMATEUR RADIO CLUB
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MEETS: 8:00 PM third Friday each month
American Red Cross Bldg, 10th & Hudson

Pres T. Van Woody W5FMX 942-2831
V-P Ken Ford WB5KHU 528-8770
Sec Joe Buswell WA5TRS 732-0676
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OKLAHOMA CITY AUTOPATCH ASSOCIATION
MEETS: 7:30 PM 3rd Tuesday, Bi-Monthly
Oklahoma Military Academy 36th & Grand

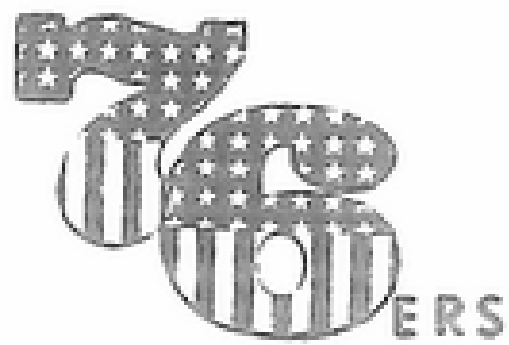
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V-P Guy Liebman K5GL 787-9547
Sec/Tr Jim Denman WB5EOL 681-6048
7705 S Charlotte Dr OKC 73159

EDMOND AMATEUR RADIO CLUB

MEETS: 7:30 PM first Monday of odd
numbered month, 3220 N Santa Fe (GE)

Pres Larry Dillard WB5CWB 685-4065
V-P Bart Wortham WA5JUJ 751-9536
Sec/Tr W. H. Thompson W5UITV 348-1475





THE BICENTENNIAL AMATEUR RADIO CLUB



FROM THE PRESIDENT

We have all heard the old saying, "Standing room only." Well, this describes the situation at our regular monthly meeting on January 18.

I must admit to being late for the start of the meeting by a few minutes and was taken by surprise when I couldn't find a parking place. Even more of a surprise was when I walked in and found standing room only.

I have decided all of these people had a definite reason for coming out on such a cold night. I am sure it wasn't just to see me. Maybe they came to hear our guest speaker, Mr. Carl Drumeller, #5JJ.

After thinking it over, I decided they all came for the same reason. They were interested in Amateur Radio. With this kind of interest ham radio has to grow. And grow is what we need to survive the up coming WARC. Maybe we can come away from the WARC by gaining space to operate.

If this interest is happening all over the country, we can't loose. May we always "find a place to park."

I want to thank Carl Drumeller for being with us. I certainly enjoyed his talk as well as everyone did.

This is a list of newly licensed or upgraded amateurs from our club:

Jay Treat	#B5ZLP	Tech.
Heinz Schilling	#B5ZGP	Novice
Thomas Hawkins	#B5Uvw	Novice
C.I. Chandler	#B5TKG	Advanced
Paul Couch	#D5AGT	Novice
Donald Duck	#B5UAP	Tech.
Clif Day	#B5TFM	General
Bob Wall	#B5TNO	Tech.

Just a note on operating. On Saturday, January 15 about 4:00P.M. I worked a ZL1AR0 --- on 10 meters. Maybe there is hope for 10 yet. Also worked Z31HR on 40 cw Saturday night January 22.

73 and Good DX
Ken, #B5PYN

FOR SALE: D-104 mic., like new. \$27.50. Heathkit assembly manuals for HA-2021 Handytalkie, HWA-2021-3 touchtone pad, SB-102, \$1.50 each. Lafayette 4 channel quad amplifier, \$25.00. Texas Instrument TI3000 desktop calculator, \$30.00. Ken, #B5PYN 685-2717

DO YOU HAVE A NICE ELECTRONIC CALCULATOR THAT WILL SOLVE ALL KINDS OF PROBLEMS? Even if you do you need all of the formulas handy. For \$10 you can buy my slide rule with all the electronic formulas and applications built right in. There is a 4 volume, electronic oriented, instruction course included. New. Joe, WA5ZNF Phone 737-1044.

WANTED: 1976 U. S. CALLBOOK. C.Y. Chandler, phone 232-9005.

FOR SALE: 30 watt 2 meter transmitter with .94 crystal. Complete power supply. \$25. WB5VXL Robbie Reid Phone 329-0735.

NEEDED: Badly need copy of HRO 60 manual and schematic. Will copy and return safely. Father John McGinty, K5HMI, 721-5651 or D.N. Diehl, K5WUF, phone 943-5438 or 235-1721.

February 1977



THE BICENTENNIAL AMATEUR RADIO CLUB



BICENTENNIAL AMATEUR RADIO CLUB Minutes of meeting

Meeting was opened at 7:05 PM by Jim Townsend, WB5VCB, sec
Minutes of the December meeting were read. Motion was made and
seconded that the minutes be accepted as read. Motion carried.

The meeting was turned over to President Ken Newberry by
Jim Townsend at 7:15.

Bulletin was read for Radio Amateur participation in Pres.
Elect Carter Inaugural ceremonies.

Coy, K5LMG, gave a talk on FCC testing procedures. Fees for
licensing have been suspended as of Jan. 1. An announcement from FCC
was given, that stated that the Engineer in Charge as of March
1, 1977 could give temporary permits to upgraded operators if
they successfully pass their test.

Comments from members placed more emphasis on the license
manual for testing material and the school is being geared for
more intense studying of this material.

The selection of Bill Riddle, WA5MZW, was announced as the
delegate for Ham Holliday Program Committee.

No report was given by Ken Burdick, as C.O.RA. did not meet
in December.

Meeting was adjourned for coffee at 7:30 and recalled at
7:55.

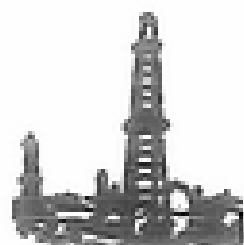
Special guest was introduced by Pres. Newberry. Guest speak-
er was Mr. Carl Drumeller. Carl has been licensed for 45 years
and enjoyed every bit of it. His subject was "Tuning a trans-
mitter."

Questions were asked on various types of transmitters by
the members and guests about tuning of their advertised trans-
mitters. Carl's talk was enjoyed by all and he was extended the
invitation to come back at any time.

President Newberry extended an invitation to all guest and
members to come back and enjoy all meetings and fellowship.

Motion was made and seconded to adjourn. Motion carried.
Meeting adjourned at 8:45.

Jim Townsend, Sec.
WB5VCB



MID-OKLAHOMA REPEATER INC.

MINUTES OF THE JANUARY, 1977 MORI MEETING

Club was called to order at 2000 cst on the dot by the new president, Chet Hazelwood, W5GDL. We had self introductions were made by one and all. Chet gave his outline for the next year's program line up with hopes that all will help to get our club off to a good start. The acting secretary for the night, John, K5QDR, gave a treasurer's report of the last year's expense accounts and receipts of the year. We even came out with a very good balance for the new year's books.

Ken, K5VVZ, reports a request as to either moving up or somewhere else on KTVY tower. The best offer was to move up to 1163 feet. Then have the Rcvr at 50 ft up and the xmtr at 50 ft down from that location. The only thing there is we will have to build a platform at a cost of approx. \$350. Joe, WA5TRS, moved the officers and Tech Committee negotiate with KTVY and give them \$500 for the move. Gene, W5GC, then seconded that motion. After some discussion by many of the members the vote was taken and passed by a very wide margin. The club also needs a new xmtr for the .94 machine. The old one we are now using is 20 years old and just keeps going with a lot of work on it at most times. Although it has not been down for very much for all the year thanks to Ron, WA5EAI.

A CORA report by Fred, W5HFN, that attempts to get all the representatives to all the committees for HAM HOLIDAY. Some discussion on some new bumper stickers was put in front of the club also. Charlie, WA5JGU, and Jack Muse are trying to get some type of tlc and storm report system set up for the next year also.

Mac, K2GKK, talked to the club about becoming QSL manager for Carl, WA4AQW/DU2, since Carl has put so much into CORA and MORI with all the help that he has done. The idea is to be thought over and decided on at the next meeting.

A lot of discussion about a new autopatch for the .67 machine was brought up. Most of the discussion was in favor, although some are still against it. The motion made by Tom, W5OZE, to obtain a patch for the machine and seconded by Jerry, W5MCJ. The vote was put to the floor and the vote came out 34 for the patch and 9 against. This will be an open patch for all the general users in the area, also about \$200 will be spent for the patch.

Under announcements for the night, only one made. Abe, WA5AUF, passed the word that the Lawton Hamfest will be March 19 and 20th.

A motion made to adjourn for refreshments was made and everyone seconded the motion.

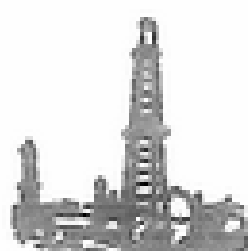
I think we had a very good meeting for so close to the first of January meeting there were 44 people including some visitors. Thanks to all who attended even got a new member and several renewals.

The next news for MORI should be coming from the new secretary, Rich, WB6FYL, who had not returned from his trip home for Xmas. Thank you all for the help during this last year as Secretary.

John Huckaby, K5QDR

My first issue of HAM RADIO HORIZONS arrived. It is the same size as the other amateur radio magazines. There are 87 pages in the first issue. The price on the front cover is \$1.00. The pages are divided into three columns and the printing is larger than QST or HAM RADIO. They got a good head start by labeling the first issue = March. The articles give the basics. I find HAM RADIO HORIZONS very interesting reading. The editors are pledged to making HORIZONS ever better. I am looking forward to getting my copy every month.

----- Bill, WA5RAQ +++++



MID-OKLAHOMA REPEATER INC.

PERSONAL SKETCHES

JOHN HUCKABY - K5QDR

John is the newly elected Vice President of MORI for 1977. He was the Secretary/Treasurer last year.

John has a wide variety of interests in Amateur Radio as well as many other interests we will highlight. He has been working on a Pip Squeek 2 recently. A final transistor was located after much searching. A companion receiver will be built also. This is John's first serious attempt to fabricate circuit boards.

His HF operating is mostly on 20 meters with some 80 meter operating. He is active on the International Transcon Net on 14313. John works DX, but limits contest work to helping others get a few points occasionally. His new Tri-bander up 70 feet helps a lot. He traded his Swan 250 for this antenna.

John got his first Amateur Radio license 20 years ago this year while in college in Ada. He had a Technician Class license from 1958 until last year when he upgraded to a General class. He was active on six meters with a Swan 250. The DX work on six included KP4DKE and some Canadians.

A TR-22C put John on two meter FM. A ten-watt amplifier is used in his mobile station. Local work includes helping to give directions and assistance. Last year, John spent two nights at the EOC during tornado alerts for health and welfare and back up for 22/82. He indicated that this is one way to spend an exciting evening, there is plenty going on.

Last year, John helped with the code in classes at the Academy. Of the two students he gave tests to, one has contacted him to report getting a license.

John works on B-52's at Tinker Field in aircraft overhaul. He tears 'em apart and puts 'em back together again. Hydraulic and camera systems are part of his work.

Non-Amateur hobbies and family activities often make interesting conversation subjects on the ham bands. John engages in a variety of these activities as we shall see. He makes leather items such as a billfold, some purses and a set of bull horns. John's wife is Twila. They have a boy, Frankie, age 9 and a girl, Karen, age 11. Frankie is in the Scouts and Karen is in Thetarthos. The family enjoys painting with cameo paints and camping and fishing at Lake Eufaula where they have a trailer. John is past grand in the Odd Fellows, and Secretary at his home lodge. Twila is Vice Grand.

John sings bass in the Mid-Del Christian Church choir. Incidentally, he has a guitar he no longer uses. It is a Gretsch, solid body with dual pickup and amplifier. He said he might as well sell it rather than just let it sit around to gather dust. Any takers?

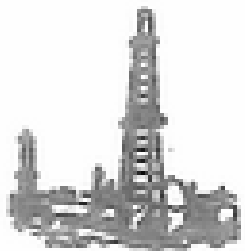
John predicted that MORI is starting a good year, but it is going to take some time and work to accomplish all that needs to be done.

=====From a tape recorded interview by
Bill, WA5RAQ=====

HAM RADIO HORIZONS promises to help you get a license. They will cover all facets of Amateur Radio, help you get equipment on the air, help in advancement of license class among other things. It will be distributed and promoted as widely as possible - outside the traditional amateur channels. They're off to a good start.

+++++ Bill, WA5RAQ -----

FOR SALE: SWAN MB-80A, fully solid state, 80 and 75 Meter SSB and CW XCVR. Bought new in April 1976. 65-75 Watts PEP Output. Asking \$250.00. Mac, K2GKK/5, 405-672-4947.



MID-OKLAHOMA REPEATER INC.

EMERGENCY OPERATING CENTER

Bill, WA5STC wants you to know that he is monitoring 34/94 or 07/67 at the EOC while he is on duty there, which is Monday through Friday from 3:30 PM until 11:30 PM. Call him to report traffic accidents, traffic lights not working and other such emergencies. There are two points to observe when making the call by 2 meters:

1. You must get Bill's attention. He is usually busy with his console. Get him by calling EOC or WB5KMD.
2. Allow a few seconds for Bill to respond. The city calls get priority, also the 2 meter rig is located away from the console.

Bill's monitoring provides us with an extra service, but it must be used to show justification for allowing the rig to be there and take up valuable space. He records your call letters in the EOC log. Also, you may phone the emergencies by landline to the EOC. When you do this, give the EOC operator your call letters for the record and for identification. The big advantage to phoning your emergency message to EOC rather than directly to the service involved is that the EOC has hot lines to these services.

Bill needs only WHAT, WHERE and your call letters. You don't need the town or city location as a general rule. He says this is not the time to discuss equipment, the weather and other chatter. Save this for when he is not on duty.

Bill is providing us a valuable service. Let's use it more.

From a tape-recorded interview by Bill, WA5RAQ

HOAX CALLS PRODUCE STATIC FOR CB'ERS

Condensed from The Sunday Oklahoman, January 16, 1977.

"Law enforcement officials will admit CBers' help on many emergencies and accidents, but a few not so good buddies are giving the rest a bad name. Some of the operators are passing along hoax calls on accidents and other emergencies, the highway patrol reports.

Bob Carleton, an Oklahoma Highway Patrol trooper and public information officer, said, 'This does occur occasionally, but most of the people giving the reports are honest about what they do.' He said most CBers who report emergencies pick up the information over their radios and pass it on not knowing whether it's a hoax or not.

Carleton said there are two important steps in reporting emergencies. 'The first is to verify the fact that the emergency does exist,' he said. He said a false report lowers the person's credibility. The second, he said, is to speak in 'plain English' when reporting an emergency.

(The hoax call) 'is always a problem,' said Roy Allen, president of the Oklahoma City Emergency React Team. How does one stop it? 'I think the CBers will have to do it,' Allen said. He added that strong prosecution of those who 'cry wolf' would also help stop the problem. "

Bill, WA5RAQ

OKLAHOMA

REPEATER

DIRECTORY

FREQUENCY	CALL	LOCATION	OTHER INFORMATION
146.			
01-61	WR5AMC	Lawton, Ok	Changed from 16-76
04-64	WR5AII *	Cavinal Mtn.	Near Poteau
07-67	WR5ADF	Okla. City	
10-70	WR5ASI *	Okla. City	(Teletype to be tied
13-73	WR5 *	Woodward	to Dallas Area)
13-73	WR5AFS	Stillwater	
16-76	WR5ADZ	Okla. City	Restricted Access
16-76	WR5ADO	Bartlesville	
16-76	WR5ADT *	Elk City	
16-76	WR5 *	Granfield	
19-79	WR5AGI	Altus	
22-82	WR5AHY	Miami	
22-82	WR5AHP -	Tulsa	
22-82	WR5ACB	Okla. City	
25-85	WR5AFY	Muskogee	
25-85	WR5 #	Mangum	Under Constr. Authorized
25-85	WR *	Okla. City	Aeronautical Radio Club
28-88	WR5AHQ	Tulsa	Autopatch Club members only
28-88	WR5AFW	Norman	
28-88	WR5AJV	Lawton	
31-91	WR5 *	Bixby-BA	
31-91	WR5 #	Kingfisher	Under Constr. Authorized
34-94	WR5AHN	Tulsa	
34-94	WR5AJP	Okla. City	
34-94	WR5ABW	Enid	
34-94	WR5 *	Durant	Status Unknown not operats.
37-97	WR5ADD	Ponca City	
37-97	WR5AE U	Ardmore	
37-97	WR5AKP	Okla. City	Not coordinated
147.			
63-03	WR5AHG *	Edmond	
63-03	WR5 *	Ada	
66-06	WR5 *	Claremore	
66-06	WR5 #	Beaver Co.	Authorized
69-09	WR5 #	Tulsa	Authorized
72-12	WB5GRG	Tulsa	Remote Base to 29.6 rest. Ac.
75-15	WR5 *	Grove	
75-15	WR5ABW	Enid	
78-18	WR5 #	Lawton	Authorized
81-21	WR5ACB	Okla. City	
87-27	WR5 *	Tulsa	
87-27	WR5 *	Stillwater	
90-30	WR5 *	Tulsa	
93-33	WR5 *	Muskogee	
96-36	WR5 *	Chelsea	
52.525-680	WR5AHP	Tulsa	
52.525-680	WR5ADL	Oklahoma City	
9.1-4.1	WR5AHN	Tulsa	
9.1-4.1	WR5AJP	Oklahoma City	
9.2-4.2	WR5 #*	Tulsa	Under Const. REST. ACC
9.2-4.2	WR5 *	Oklahoma City	
9.5-4.5	WR5 *	Lawton	
9.0-4.0	WR5 *	Tulsa	Teletype-computer Intercon.

* Repeaters believed to be operational. Calls and other information not available

#Repeaters Authorized and within the 6 month construction period.

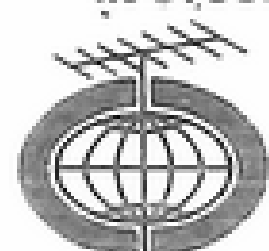
The above repeater information was obtained from the Tulsa Repeater Organization's newsletter. Please send corrections/additions to CORA at the address shown on Page 2 of this issue of C & E and we will try to provide a more current list in an upcoming issue.

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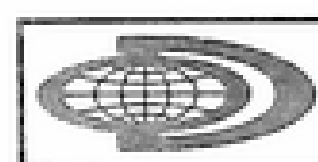


cushcraft

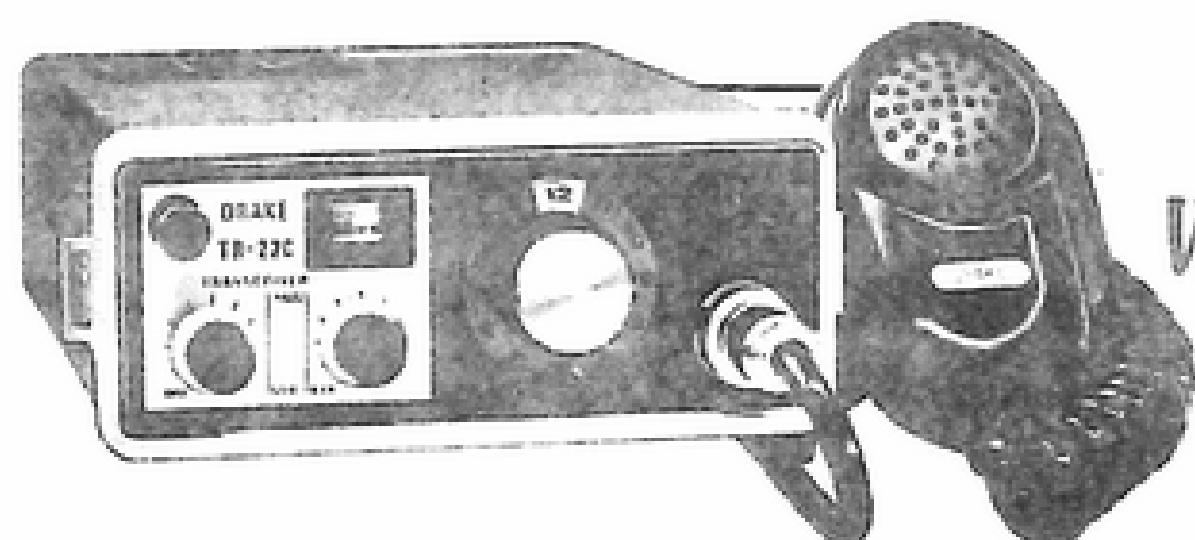
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B & J Two Way

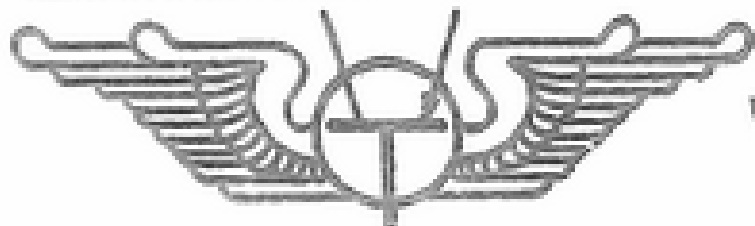
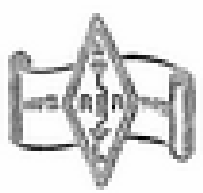
+ + + AMATEURS DEPARTMENT + + +

1516 S.E. 44

PHONE 672-1381

OKLAHOMA CITY

ONE BLOCK EAST OF I-35



W5PAA

YAKKEY-DEE-YAK FROM THE PRESIDENT

The January meeting of the ACARC held annual elections of officers. As a result, Bill Hulse, W5NI, was reelected Vice President. Al Prince, WB5KCU, and Bill Oliver, K5KDR, did not choose to run again. Rob Runyon, W5JES, was elected Secretary-Treasurer and I was elected President. Lloyd Kirk, WB5HUP, was elected assistant to the president for associate members. I hope I will be able to help the club and with your support, we should have a good year.

I want to thank Al and Bill for the outstanding job that they have done. Rob and I have our work cut out for us to equal them.

Don Templeman, WB5NIY, has asked to be relieved of his job as club editor for the CORA C&E. So I have appointed Bill Oliver, K5KDR, as club editor. This is quite a job, so send in articles and items of interest to him.

I have been in contact with Rob and Bill Hulse about activities of the club. Rob and Bill are coordinating getting up notices about the club on all Aeronautical Center bulletin boards. Also, Rob has sent in a notice to Wiretap (AC employees newspaper) about the club and the elections. We want to get the word out to the FAA students about the club and W5PAA. Good publicity will help any club. Therefore I would like for one of our members to become a publicity chairman to help get the word out. Lets have a volunteer.

We hope to have some good programs during the next few months. If anyone knows of good programs that can be presented, please let it be known. We could use a program chairman too. It looks like we have the next couple of meetings set. On February 4th, Bill Brodie, K3TGY, will talk about what is needed to get on RTTY and some of the basics. In March, he will demonstrate his RTTY 2 meter repeater operation and microprocessor control and operation. Both programs should be very interesting. In the future, I hope to have a program on microprocessor use by the amateur in his shack. The possibilities are only limited by the imagination.

Since I have lived on OKC for less than 2 years, I will take this opportunity to introduce myself to the members that do not know me. I was licensed as W4YDY and WN4YDY in 1952. In 1953, the General Class was mine while still in high school. I was first in Raleigh, N. C. to go SSB in 1957. I have been a member of the ACARC since January 1964 and I used W5PAA several times on my trips to the FAA Academy. I know the value of that station to the students. In 1968, I received the Advanced license followed by the Extra two months later. A charter member of the Raleigh Amateur Radio Society, I was appointed editor of the RARS NEWS, a position that lasted over 5 years for me. During this time, I served 2 years as Treasurer of the Amateur Radio News Service and was appointed the Roanoke Division's first ARRL Public Relations Assistant. My on the air time is spent on 80 thru 10 and 2 meters, when I can get the rig away from my daughter, Susan, WA4AKB.

From the support I have received from W5NI, W5JES, K5KDR and WB5HUP, I know we can continue to have a successful club. But it will take support from all members to make it go, so I know we will get it. Again, thanks for your vote of confidence. I hope you won't be disappointed.

Dave, W4YDY

From the Secretary: W5PAA

When I was approached by the nominating committee about the Secretary/Treasurer post, I was quite reluctant to be come so involved in amateur radio matters so soon after "re-activating" a multi-year QRT condition. Contributing to the feeling was a sure knowledge that one does not undertake that position without a willingness to spend the time and effort necessary to properly support the club and it's members.

The arm twisting was brief, but fierce, and I'm honored for your confidence. Needless to say, I'll do the best job I can for you, so be sure and let me know your wishes. My extension is 4221 and home phone 373-1818.

I don't need to tell you that I'm taking over a mighty big pair of shoes to fill from Bill (K5KDR). He's done an outstanding job during the past three years, and the club membership has benefited from his efforts. Thanks Bill!!! Also, thanks for the smooth hand-off of the job, and the promise of keeping active in club matters, and for assistance when needed. Bill will be the club editor for C & E.

On a personal note: A few of the club old timers will remember me as active up through 1964 or so in the club, but not so much on the air. I'm not what can be called a "well-rounded" amateur because most of my operating activity is restricted to the low ends of 40 and 80 meters. Things haven't changed much in that area and dropping back in was much easier than anticipated, although the old vibroplex is harder to drive, and the ear has acquired a rather thick tin plate which is slowly wearing off. Even though having one of the first SSB rigs on in Nebraska, bunches of years ago, fone operating still hasn't taken over in our shack. A lively interest in VHF CW/AM from years back has been replaced by a more lively interest in the joys of CW/FM as you can tell by listening to this old Rag Chewer on the MORI machines, and soon via OSCAR. That's it for the personal note. Needless to say I'm glad to be aboard, and let me know how I can serve you and the club.

73

Robby W5JES

* * * * *

Minutes of the Aeronautical Center Amateur Radio Club for January 7th, 1977.

The meeting began at 8:04pm with Vice President Bill Hulse, W5NI, presiding. A round of self introductions and comments was called for: Kermit, K5JEA, is still after the DX, Ralph, W5AA, is having a ball on 2 meters, Jef, WB5GWB, is enjoying a vacation from school & doing projects, Bill, WA5RAQ, was proud to report granddaughter #3, Ellard, W5KE, said he has 4 grandkids- 2 boys and 2 girls, Dorothy, WB5ELG, said she handled alot of Christmas messages, Robby, W5JES, worked his first N call, it was N4BP in Florida, Charlie, WA5JGU, reminded us of SET the weekend of January 29 & 30. He also reported on Al, WB5KCU, in Corpus Christi, Texas, Daisy, Al's XYF, is in the hospital there, Dave, W4YDY, worked WB4YDY in Little Rock, Ray, WB5BTT, finished his Heathkit Project, John, W5UNA, said his interests are in computers & repeaters, Ivan, W5HFU, is looking for material for QCWA, Jerry, W5MCJ, reported H.O., WA5MLT, will be the new Cleveland County Emergency Coordinator, George, W5NTL, has been getting on 2 meters occasionally, Lloyd, WB5HUP, is building an HW101, Bill, W5NI, has a new 2 letter call; formerly W5UGZ.

The annual election of officers was held. The new club officers
February 1977 11 CORA Collector & Emitter

are Dave Langley, W4YDY/5, President. Bill Hulse, W5NI, Vice President. Robby Runyon, W5JES, Secretary & Treasurer. Lloyd Kirk, WB5HUP, Assistant to the President for Associate Members.

The latest news on the repeater is that the frequency pair: 146.25 - 146.85 was approved by the Frequency Coordinator in Tulsa. The minimum time to get it on would be at least 6 to 8 weeks. John, W5UNA, is really doing the work on this project. Thanks alot John.

The meeting was adjourned at 9:04pm for refreshments.

* * * * *

TECHNICAL REVIEW

-W5JJ-

QST, December arrived late but is worth waiting for!! The two articles on ground systems will be quoted for years to come. And the "Log-Yag" antenna balances the other aspect of a radiating system. Coils, their construction and application, get covered by W1FB. And there's info on making you wattmeter read peak power output and xmtr power output measurement is the subject of another article. There's good info on checking into slow-speed tlc nets, a good means of acquiring excellent operating habits.

ELECTRONIC PRODUCTS, December goes deeply into the subject of cooling rigs. CQ, December makes a pitch for RF clipping of speech waveforms. There's a fascinating history of the development of low-powered transmitting tubes. Under "Novice," one gets a review of Classes A, B, and C operating characteristics. Part 1 of a series on waveguides looks intriguing, as does a very challenging probe into radiation.

WORLD RADIO NEWS, December tells how a blind and paralyzed man mastered the art of sending code with his tongue! And to think that there are those able-bodied punks who whine about having to learn code to get a license!

RADIO COMMUNICATION, November describes an FET VHF dipmeter, continues its series on understanding logic circuits, reviews the Heath HW-8 transceiver, and touts putting VFOs in a temperature-regulated enclosure for top stability. As ever, its Technical Topics presents a number of intriguing ideas.

ELECTRONIC TECHNICIAN/DEALER, December courtesy of W5KE, describes the functioning of constant-voltage transformers. Another article concerns the noise figure of VHF amplifiers.

73, January seems dedicated to the revival of discredited myths about horrific effects of moderate VSWR on transmission lines; a step back into the Dark Ages! Wayne gives sage advice on how to run clubs. A very interesting article deals with measuring xmtr performance. Changing a grounded-positive power source to one with a grounded-negative is covered by a staff-written article. The staff also came up with some good info on compradors. From VK-land came instruction on building a stable VFO. The use of solar power is touted by W2EUP. After much rambling ('73 pays by the word!), WB6JNN gets around to recommending SSB over FM for VHF mobile use. W2OLU shows how to make your own overload relays out of buck-a-bushell 24-V dc relays.

POPULAR ELECTRONICS, February tells how to build a LED read-out for a single-conversion receiver. Its Amateur Radio section

evaluates speech processors.

IEEE SPECTRUM, December asks "Where do we go from here?" in electronics as well as other scientific fields.

WORLD RADIO NEWS, January lists the FCC's amateur frequency proposals for WARC in 1979.

RADIO COMMUNICATION, December discusses crystal ladder HF filters and several types of low-pass filters. It gives construction details for a complex 144-MHz receiver. Too, there's a learned discussion of the affect of tropospheric disturbances upon 144-MHz transmissions. As usual, Technical Topics section contains much of interest.

* * * *

RADIO COMMUNICATION HANDBOOK Volume one of the fifth edition to this British-produced handbook now is on the market. In its revision a determined effort was made to avoid the common pitfall of simply carrying over much from previous edition. To a degree, its editors have been successful.

Like most handbooks, it starts with principles. Unlike most, it deals with objects rather than theories. Where theory is both unavoidable and desirable, it is interwoven with objects. The profusion of illustrations, both photos and drawings, is impressive and of real worth in explaining the principles of electronics.

Of course, it must touch upon vacuum tubes, but its main emphasis is upon semiconductors.....as it should be. Their theory of construction gets a quick but adequate touch; their application a much more detailed treatment.

The section on receivers is good. I wish, though, that the author had not made the mistake of proclaiming that the first receivers used crystal detectors! Surely, as an Englishman, he should have known of the Marconi Magnetic Detector and the Fleming Valve! But aside from that bobble, the text is factual. Receivers get a much more thorough treatment than one finds in handbooks published in the USA. It appears that the British do more building than we do, and that they get involved in more intricate designs than we do.

The receivers really have two sections, one for HF and the other for VHF and UHF.

Similiarly, transmitters have two sections. Basics are treated in the HF portion, with those peculiar to UHF covered in that chapter. Here, again, the English dedication to precise detail shows up. Instruction for building transmitters is much more explicit than in our handbooks.

Keying and break-in systems rate an additional chapter, explaining various methods and techniques.

Modulation methods also rate a chapter. Here, in my estimation, too much space is devoted to 6A3 ("AM") systems. Of course, SSB is but a specialized type of "AM", and an understanding of the basic "AM" principle is vital to the comprehension of SSB; but I believe 6A3 has been given more space than it merits. Frequency and phase modulations circuits are covered quite well.

The first volume concludes with a short chapter on radio teleprinters. Although short, it is adequate.

All in all, this fifth edition is a welcome addition to the bookshelf of any serious radio amateur. In many respects, it does not duplicate matter found in other handbooks. Where the subjects are the same, the methods of exposition are different. The several approaches to the explanation of any complex subjects enhances

the ease of comprehension. The treatment of old and familiar subjects is made from a fully modern standpoint, relating them to modern components. It's today's language, today's techniques.

I highly recommend the book.

W5JJ

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SEARS BACK IN AMATEUR RADIO BUSINESS

"Way back yonder, in the very early '20s, Sears marketed a line of spark transmitters and crystal-detector receivers. Later, about 1935, they marketed a communications receiver. It, however, was not worth a damn; I know, having bought one that I returned and bought, instead, an RCA ACR-136.

Now Sears lists a 2-meter transceiver in its "big" catalog. Also, it lists the Yaesu FRG-7 receiver.

Can this be a "sign of the times," an indication that Sears, a sensitive marketing firm, considers amateur radio a viable entity again?

THE YAESU FRG-7 RECEIVER

General-coverage HF receivers are a bit rare. The ones available usually fall into one of two categories: Very good and very, very expensive; low cost and not worth a royal whoop in the sizzling hereafter.

Now there's a middle ground, the Yaesu FRG-7. It's not cheap, selling for around \$300.00. Neither is it junky.

Starting at 0.5 MHz and covering, without a break, up to 29.99 MHz, it provides moderate selectivity (ceramic filter) with a degree of stability that Collins would boast about. The AGC is good but not superb; ditto for the audio quality. There're three degrees of AF filtering, two of which are actually useful.

On CW it's a honey, doing everything you could expect from a receiver having such IF selectivity. Really, it's a pleasure to use it!

On SSB, though, one needs to hedge a bit. The tuning rate is too rapid. That, coupled with a tiny bit of backlash in the dial, can (and often does) lead to frustration (and cuss words) when attempting to tune for natural voice timbre. It can be done, though, but it ain't easy!

Nevertheless, the FRG-7 is well worth its cost.

W5JJ

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AMATEUR RADIO OPERATING TRADITIONS

-W5JJ-

From the very start of amateur radio operating, amateurs have prided themselves on initiating and maintaining a high standard of operation. Such standards never have been established on some arbitrary or artificial basis. Always the consideration has been clean, ethical operation, operation that permits the maximum transmittal of intelligence at maximum clarity in minimum time and with maximum courtesy toward other amateur radio operators.

A tradition of high standard in courteous practice has been followed by the vast majority of thoughtful operators. There have been

exceptions, of course. Sometimes these exceptions have been the results of deliberate rudeness, purposeful departure from polite behavior. More often, though, they have been unintentional acts committed because the operator had not made himself informed about accepted practices.

Not too often is necessary to deliberately seek out instruction on what constitutes "good" operation. Just following the norms of polite, civilized behavior automatically guides one into the proper procedures!

Let's take an example. Suppose you approach a group of acquaintances who are chatting among themselves. You'd like to say a bit, yourself. Would you, as a civilized human being, barge into that group yelling "Break! Break!?" Of course not! You'd be cut dead for the crude lout you'd just shown yourself to be! You'd actually say something like "Hello," "Good morning," "Good evening," or some other polite word of greeting. Then you'd ask if you could join their conversation.

Once admitted into the conversational group, would you, as a polite person, take over and monopolize, demanding that others keep silent solely because they'd permitted you to join their conclave? Of course not!

Another example.. Presume you're in a crowded drawing room. People are chatting in little groups. Would you, as a polite individual, start shouting loudly so as to drown out all other conversations just so you could voice your ideas to the persons immediately around you? Not if you're a well-mannered person!

Another example. You're talking to a chap; there's nothing to make your words difficult to hear and comprehend. Would you, as a cultured person, say everything over and over again, implying your listener to be so devoid of intelligence he has to have every statement drummed home with repetition before he can grasp it? Not if you want to keep friends!

The possible examples are endless. There's no need to trot them out for your inspection. You, as an amateur of radio communication and technology, have demonstrated that you're a cut above the average individual by your having had the tenacity and determination required to master the requirements for passing the FCC examination. (Many have the intellect; few have the determination!) Therefore you have the ability to analyze a situation, to arrive at logical conclusions, to take measures to put your conclusions into practice.

Just a bit of reflection will show the astute individual there's nothing strange about "good" amateur radio operating practices. They're just the actions that fall naturally to well-mannered persons!

* * * * *

FOR SALE OR TRADE

The ACARC will dispose of the club station Signal-One transceiver in order to acquire equipment which is less sophisticated and more suited for our use in the station. We will sell outright, or consider trade for good, unmodified current model gear. Contact George Lagaly W5NTL or Robby Runyon W5JES for details.

Congratulations to George, WB5QNU, and his XYL on the new PNP harmonic.



XXXXXXXXXX	X		X		XXXXXXX	X		X
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The yearly weather watch meeting will be held TUESDAY, February 15, 1977, at 7:30 P. M. All amateurs that monitor the weather net are urged to attend. Gary England of KWTW, Channel 9, Oklahoma City, will give the program. This is a very important meeting and everyone should make plans to attend the meeting. It will be held at the KWTW Studio, 7401 North Kelly, at 7:30 P. M. There will be announced changes in the weather net procedures and weather-watch rules. Again, ALL Oklahoma state amateurs in range of the 22-82 machine are urged to be in attendance (i.e., MORI, Enid, Elk City, Lawton, Altus, Woodward, etc., are all welcome).

6 Meter Repeater is moving.

Yes, the 6 Meter repeater is moving from Edmond to Northwest Oklahoma City. The 450 machine is in the process of moving to a higher location. WB5JBL (Frank) has been appointed as head of the technical committee.

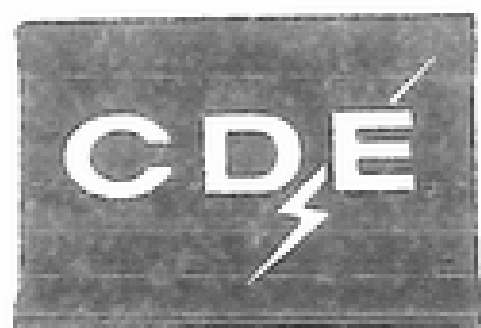
The spare Motorola repeater (22-82) Has been installed at the Edmond site for back-up purposes in the event of emergency.

Gary McCormick, WA5ETV, President

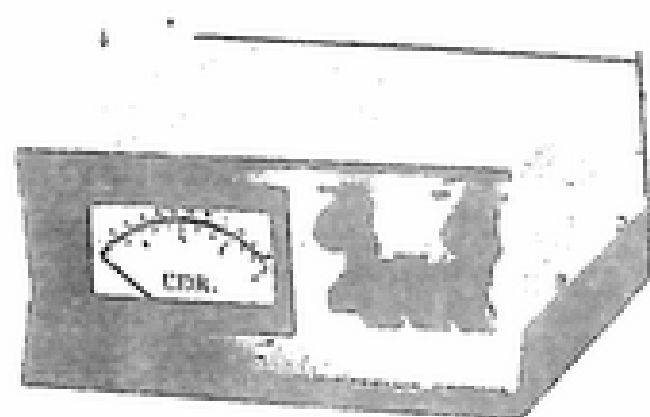
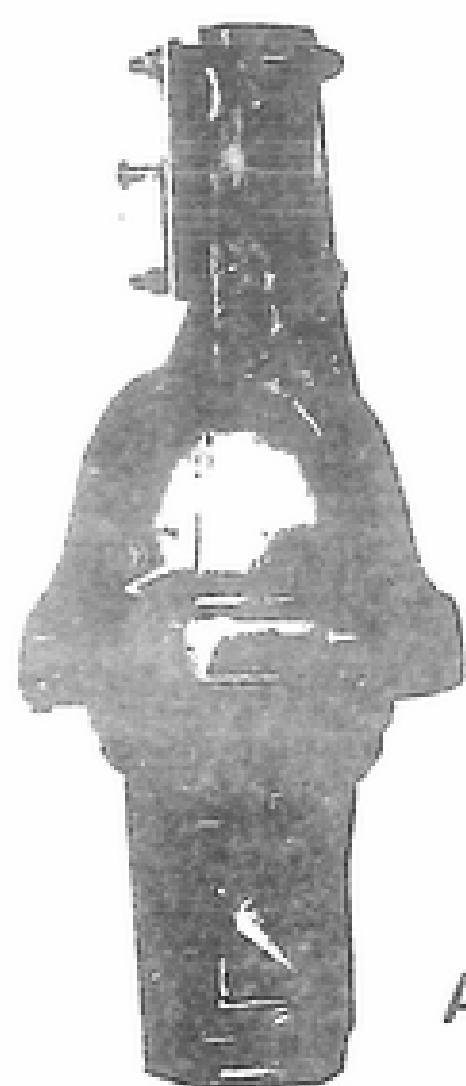
WANTED: TWO SETS OF BOARDS FOR HAPPY FLYERS DF UNITS. CONTACT FRANK, WB5JBL, 751-3577.

NEEDED: SPARE PARTS AND EQUIPMENT TO BUILD JUNK BOX. CALL BOB JANDA, 341-2046.

FOR SALE: WORLD'S GREATEST HAM SHACK. HOUSE (1300 SQ FT), 3 BR, 1 1/2 BTH, PUT. CTY.W. SCHOOLS. HAS 20 X 24 OUTBUILDING, HEAT, A/C, STORM SHELTER. DON TEMPLEMAN, WB5NIY, 354-6271.



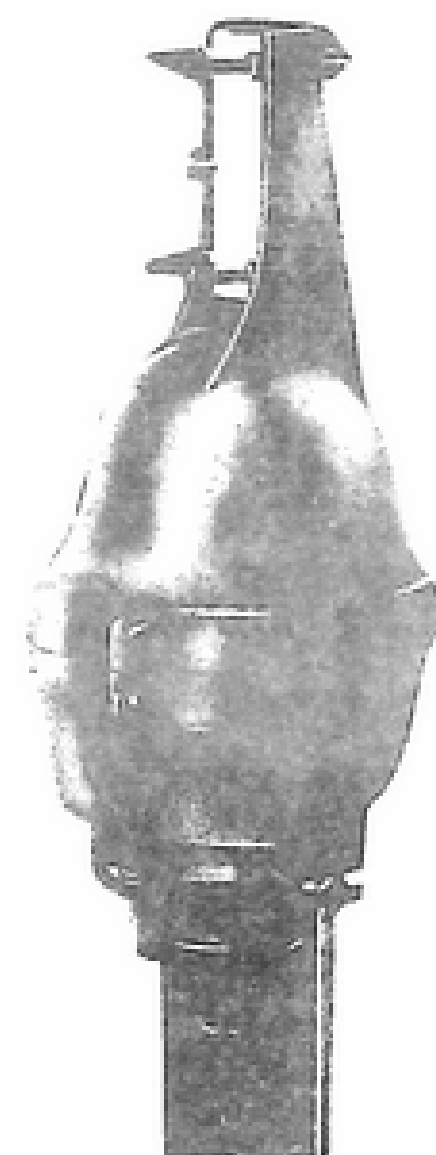
communication rotor systems



A.R. 44.....\$91.25



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C O R A C O M M E N T S

READING BACK THROUGH THE PAST ISSUES OF THE COLLECTOR AND EMITTER, IT SEEMS THAT EVERY PRESIDENT OF EACH CLUB HAS HAD A CHRONIC PROBLEM. IT IS STILL WITH US. THERE SEEMS TO BE A COMPLACENT ATTITUDE AMONG ALL EXCEPT A VERY FEW OF THE AMATEURS IN THIS AREA. THEY SAY, BY THEIR SILENCE AND LACK OF PARTICIPATION IN THE AMATEUR ACTIVITIES, EVERYTHING IS FINE. THEY SAY, BY THEIR SILENCE, LET CHARLIE, BOB, BILL JOE, FRANK, ETC. DO IT. THEY SAY, BY THEIR LACK OF PARTICIPATION, "I DON'T CARE HOW IT GETS DONE, JUST BE SURE IT DOES, SO I CAN ENJOY IT; THEN ALLOW ME TO BE VOCAL BECAUSE IT WAS NOT LIKE I THOUGHT IT SHOULD BE."

WHAT KIND OF EXCUSES DOES ONE GET WHEN PLEADING WITH SOMEONE TO PARTICIPATE? I'LL BET MOST OF YOU WOULDN'T BE SURPRISED AT SOME OF THE RESPONSES I HAVE RECEIVED. WHY WOULDN'T YOU? BECAUSE YOU HAVE USED THEM YOURSELVES. I WILL NOT LIST THEM BECAUSE IT MAY PROVIDE SOME MORE EXCUSES TO DO NOTHING. I WILL, HOWEVER, REFER TO ONE THAT IS USED BY TOO MANY: "I HAVE ONLY BEEN AN AMATEUR FOR A LITTLE WHILE, WHAT CAN I DO?" MY RESPONSE TO THAT? I HAVE ONLY BEEN AN AMATEUR FOR A LITTLE WHILE. WHY DON'T YOU JOIN ME AND MAKE THIS HOBBY WE HAVE JUST ENTERED MORE WORTH-WHILE, MORE INTERESTING AND MORE ENJOYABLE? THE FUTURE OF AMATEUR RADIO NEEDS YOUR HELP. THIS GOES FOR YOU WHO HAVE BEEN AROUND FOR MORE THAN A LITTLE WHILE: HOW MANY INACTIVE AMATEURS, LICENSED FOR SOME TIME, ARE BEING REACTIVATED AFTER THEY BEGAN TO PARTICIPATE AGAIN? WHAT IS THE REASON FOR ALL THIS? P A R T I C I P A T E YOU MAY FIND YOU LIKE IT. PARTICIPATE IN YOUR CLUB, PARTICIPATE IN CORA AND PARTICIPATE IN MAKING AMATEUR RADIO MORE ENJOYABLE, MORE SOCIABLE, MORE _____ AND MORE _____. (THE LAST TWO ARE TO BE FILLED IN BY THE READER.)

AFTER THE HAM HOLIDAY LAST YEAR 121 PEOPLE RESPONDED TO THE EVALUATION SUMMARY OF THE 82 RESPONSES FROM HAMS AND 39 FROM THOSE WHO ALLOW HIM HIS HOBBY, THE MAJORITY HAD NO COMPLAINTS ABOUT HAM HOLIDAY ITSELF. THERE WAS ABOUT ONE-THIRD OF THE RESPONSES THAT FELT THE RATING LESS THAN GOOD. WITHOUT EXCEPTION, THE CRITICISM DIRECTED TOWARD THE CONTENT OF HAM HOLIDAY, INDICATED A WILLINGNESS TO COMMENT. WILL THESE SAME CRITICS DIRECT A WILLINGNESS TO AMEND THE PROBLEM AREAS? IF NOT, PLEASE DO NOT CRITICISE SOMETHING THAT YOU COULD HAVE CORRECTED. BETTER YET, CRITICISE AND DEVOTE MAXIMUM EFFORT TOWARD CORRECTING THIS SITUATION; FOR THE BETTERMENT OF HAM HOLIDAY AND ALL OTHER AMATEUR ACTIVITIES.

SOME OF THE COMMITTEES FOR HAM HOLIDAY 1977 ARE STILL IN THE NEED OF MEMBERS, SO CONTACT YOUR CLUB PRESIDENT AND GET IN ON THE FUN PART OF HAM HOLIDAY, BEFORE THERE IS NOTHING LEFT EXCEPT HAM HOLIDAY ITSELF.

73

Gene, WP5SQC

FOR SALE: Motorola, HT-200, UHF Handie Talkie, with 449.1/444.1 crystals, battery and flexible antenna. \$140.00. Also, pair of Cushcraft 11 element 2 Mtr. antennas with stacking kit. \$40.00. Don, WA5TAW, 733-3044.

FOR SALE: Clegg, FM-27 B, synthesized, Mobile Mount, Deluxe AC Supply, TT Pad, \$400.00. Also sell new Larsen 5/8 Wave Mobile Antenna, \$20.00. Want to buy tower and a 40 meter mobile antenna. Jim Kelley, WA5LKS, 672-5248 or 672-2272.

FOUND: A stolen HR-2B has been recovered by the Oklahoma City Police Dept. Owner is still lost. Stan, WB5UIY, 495-2137 can help reunite radio and owner if the latter can describe his radio. Persons who think it may be theirs should be able to describe unique mounting bracket, crystal location and/or Serial Number. Stan advises to call after 4:00 PM.

WANTED: Issues of Ham Radio Magazine published before 1974, particularly, August 1972, PAT, WB5JYK, 943-3219.



Club NEWS

W5LOW
The Elmer Cockler Memorial
Station

MINUTES OF JANUARY MEETING

Meeting was called to order 8:10pm, January 21 by President TOM, W5OZE with 27 members and guests present. Election of club officers began immediately. The nominating committee presented:

T. Van Woodie, W5FMX, President
Ken Ford, WB5KHU, Vice-President
Joe Buswell, WA5TRS, Secretary
Ellard Foster, W5KE, Treasurer

No additional nominations were made before motion was passed that nominations cease and the candidates be accepted by acclamation. Woody took over immediately.

Ken, WB5KHU, presented ex-President, Tom with a wall plaque containing an ornamental gavel and the club thanked him for his tenure in office.

Election for directors followed. Jim Williams, K5VRL, Bill Noland, WA5FWD and C.Y. Chandler, WB5TKG, were elected to replace retiring Board Members WA5TRS, WB5KHU and W5VCJ.

Charlie, WA5JGU, reported on plans made for Simulated Emergency Test. Sunday, January 30 is the date for Oklahoma County activity which will center around the station at Red Cross Headquarters, N.W. 10th and Hudson. On Saturday afternoon, January 29, K5VRL, WA5JGU and W5OZE will keep the club station open for possible incoming traffic from other counties having SET on that day. The coffee crowd will man the station in the morning.

Steve, W5VCJ, mentioned that in July, the club will celebrate its 20th anniversary. He has many old films that might be fun to watch. Other members have memorable photos and movies, so a portion of the July meeting will be set aside for nostalgia.

Some discussion followed on current notices of proposed rule making by the FCC. WARC proposal, the Bandwidth Thing and Repeater Deregulation were subject of much discussion.

Ken, WB5KHU, announced he is finally a father. I forgot the gender but both youngster and mother are doing fine.

Roselyn, YL of Bob's, W5HXL, has had quite a time in the hospital after some surgery. She has spent almost a month there. At last report, she is recovering and should be getting out of intensive care. We all hope she recovers quickly.

Roy Albright has a new call, N5RA.

The meeting was adjourned for much lively Bull Session, coffee drinking and donut eating.
Joe, WA5TRS, Secretary

SCHEDULE OF THE YEAR'S MEETINGS

During the December meeting, it was decided to change the club's meeting format to make them more interesting to members and non-club members alike. Business would be held to a minimum. The programs would be divided into two parts: one for novices and one for general interest.

Most subjects have been selected and the following is a monthly list. Where someone has been identified to conduct the program, his call is listed.

This year looks like it will be a good one for the club with an able leader and some good looking programs so come on out. If any of you have any ideas for programs you would rather see, bring it up for discussion. The best place to get a hearing is at the Saturday morning eyeball QSO's at Red Cross. The list follows on the next page; keep it handy.

	<u>NOVICE</u>	<u>GENERAL INTEREST</u>
Feb	Assembling the station(WA5JGU)	Safety (Jack Muse)
Mar	Operating Procedures (including introduction to Traffic Handling) (W5JJ)	Emergency Communications (WA5JGU)
Apr	Antennas & Transmission Lines (W5HXL)	DX Chasing
May	Necessary Station Accessories (WA5TRS)	Advanced Test Equipment (WA5TRS)
Jun	Buying used gear	Special Communication Activities
Jul	Traffic Handling (W5RB)	20th Anniversary (W5VCJ)
Aug	Watermelon Meeting	
Sep	Test Equipment (W5KE)	Simple Logic Intro (WA5TRS)
Oct	Special Types of Communication (RTTY-ATV-SLO SCAN-SATELLITES-etc.)	Microprocessors
Nov	Construction Methods and Parts Scrounging (WA5TRS and W5HXL)	Mobile & Portable Emergency Equipment
Dec	Christmas Meeting	

JOE, WA5TRS

DAYTON HAMVENTION

Some of the fellas are wondering if there is enough interest in travelling to the Dayton, Ohio Hamvention to charter a bus. The Hamvention is April 29, 30 and May 1. The nearest hotel, the Holiday Inn at the circle, still has rooms available and ground transportation is available in Dayton.

Glen Franklin, WB5PEC, who brought up the idea to me agreed to find out what the terms are with a bus company and handle inquiries from potential convention-goers. Whether it is feasible or not depends on the number who are interested. It will be necessary to act fast so if you are interested look for Glen on '52, or 01/61 in the evenings, call him at 262-3573 or drop him a card at 512 S. Macomb, El Reno, OK 73036

I went to Dayton last year for the first time and wild horses couldn't keep me away this year. It was superb!

JOE, WA5TRS

TWO METER OPERATION IN SAN ANTONIO, TEXAS

During the period 17 thru 21 October 1976, I was in San Antonio, Texas on temporary duty. I had a very interesting week; talked with Roy Albright on the 34/94 repeater. Roy directed us from the Air Terminal to the motel. I also talked to a couple of other fellows who had recently spent some time in Oklahoma City. One of them was a young fellow that graduated from the college at Bethany. I can't remember his call now, but he informed me that he had heard WA5JGU earlier in the day calling Roy. (Charlie's everywhere).

One afternoon after returning from Kelly A.F.B. I glanced out my sliding patio doors from the third floor of the Holiday Inn and saw a young couple in the process of liberating a C.B. type radio from a Volkswagon. I slid the glass door open and yelled for them to get out of "my" car. They made tracks - and without the C.B. radio. I located the owner of the car, and he retreated to his room with the radio in tow.

I flipped the talkie on that same evening, after the Reds had disposed of the Yankees, and was quite surprised to hear C.B. lingo flowing fluently on the 34/94 repeater. After listening carefully, I detected that one of the operators was apparently an amateur and leading the other station into conversation.

The amateur was doing a beautiful job in keeping the illegal station on the air
CORA Collector & Emitter

(the C.B. type's identity was Tom Cat). He was able to get him to key down with dead carriers several times in the pretense of pointing his beam, and giving him a good signal report. This went on for approximately one hour and forty-five minutes with some of the corniest lingo you could imagine. Then after awhile: "Hey Tom Cat, where did you go" - then another voice, "This is W5 _____, old Tom Cat is in police custody, and the radio recovered, operation complete."

I heard later that one of the reasons it took so long, was trouble convincing the police to move after the culprit had been located. I talked with some of the local amateurs the following day and offered my congratulations.

They have still another unlicensed operation, a nice, pleasant, sweet voice, whom they refer to as "Sweet Thing." She doesn't harass them, but just occasionally breaks in with a comment and then she is silent; consequently they have not had any success in locating her. Her lone comment the night of the referenced action was "well it took you long enough." Then the next day while the locals were discussing the operation, she broke in again and said, "but you can't find me." It sounds as if they have adopted her as a mascot, so to speak. Maybe if they ever find her they can convince her to get a license and join the amateur ranks.

One final comment - the Hemisfair tower surely makes a fine location for operation with the talkie.
TODD, WA5VAQ

NEWS FROM THE CANDY COMPANY

In a notice of proposed rulemaking, Docket 21033, released January 6, the FCC is proposing several things of interest to VHF and UHF fans.

1. It proposes to delete those provisions of 97.40, 97.41 and 97.43 requiring that licensees obtain prior approval to operate a remotely controlled station and requiring that repeater stations, control stations and auxiliary link stations be separately licensed. All amateur station licenses would convey authority to operate as repeater, control, auxiliary link, and remotely controlled stations now operate.
2. New terms, "Repeater Operation" and "Auxiliary Operation" are defined.
3. The rules would be revised to permit portable and mobile operation of all primary, secondary and club stations when such stations are in repeater or auxiliary operation.
4. Assignment of "WR" prefixes for repeaters would be discontinued, except by special request. Stations with "WR" prefix would be limited to repeater operation.
5. Stations in repeater or auxiliary operation using "traditional" call signs would be identified by the suffix "R, RPT, repeater, A, AUX, or auxiliary" as appropriate.
6. Identification of repeater stations would be made at ten, rather than five minute intervals.
7. Comments are solicited on the issue of recording automatic repeater operation and retaining for thirty days.
8. Requirement regarding information on control operators kept in repeater logs would be relaxed to require only listing of names, addresses, and primary call signs. A list of authorized control operators would be posted at the transmitter site.
9. Repeater and auxiliary operation would be allowed on all frequencies allocated to the Amateur Radio Service, except 435 to 438 MHz. Requirement for monitoring frequencies below 225 MHz, used for auxiliary operation, before and during periods of operation, would be deleted.
10. Comments are solicited concerning present and future anticipated interference patterns, adequacy of present techniques used by amateurs to limit interference, and sufficiency of voluntary cooperation as it now exists.
11. Comments are also solicited on ERP of repeaters both in current repeater

subbands and on frequencies not yet allowed.

Comments are invited on or before April 1, 1977 and reply comments on or before April 15, 1977.

Effective January 20, the name of the Amateur and Citizens Division of the FCC was changed to Personal Radio Division.

Effective March 1, Amateur Radio Operators who pass examinations for higher class of license will be given an interim amateur permit allowing them to operate under newly earned privileges. The interim permits (FCC Form 660-B) will be good for a maximum of 90 days and records will be kept at the office of issuance.

On phone, when using the added privileges allowed by the interim permit, transmissions will be identified with the licensee's call followed by the word "interim" followed by a special identifier shown on the permit (relates to the District which issued the permit). On CW, the call will be followed by a virgule (DN) and the special identifier.
JOE, WA5TRS, from The Federal Register, Jan 10 & 17

RELAY CHATTER

Cliff Appel, WB6ANM, one of our better correspondents, writes to say that there is a West Coast station sending code practice and may be receivable when WIAW is not. Starting at 2200 CST, W6QIE sends practice on 3590 KHZ. The schedule is: 2200, 5 WPM; 2215, 8 WPM; 2230, 11 WPM; 2240, 14 WPM; 2250, 17 WPM; 2300, 20 WPM; 2310, 25 WPM; 2320, 30 WPM. Practice ends at 2330 CST.

Cliff thanked me for publishing his article on transmission line impedance. Hell, he doesn't need to thank me, I want to sincerely thank him and all the other contributors for sending good material in for publication.

I swear, I am going to publish two blank pages of scratch paper someday in honor of all you guys who have submitted a big fat zero!

Cliff's address is now 6047 Woodminster Circle, Apt. #12, Orangevale, CA 95662.

A round of amateur licensing classes was completed this month. More classes are beginning. Classes for General are being held on Monday nights, 7 PM, at Yukon High School, Room B13. Alan Perkins, WB5NER, 354-6520 can be contacted for information. A novice class might be started there if there is sufficient interest.

Class for General at American Red Cross is being held on Tuesday nights from 7 PM to 9:30 PM. It will run for about three months. Charlie Greene, WA5JGU, 943-5631 for information.

76'ers is holding class for Novice, General & Advanced at the Air National Guard Armory, Will Rogers field on Tuesday nights. Coy Day, K5LMG, 691-1194, has information.

GIL, W5RB, spent some time at Fort Sill Army Hospital. He was released on the 13th after about a two-week stay. Doing OK, except for recuperation from chasing those Army nurses.

BILL, K5EA (ex K50CX) was appointed during Gil's absence to act as net manager of OLZ.

Oklahoma Traffic and Weather Net needs a couple of additional stations to assume net control. If located in the Oklahoma City telephone area, net control can phone in weather. If outside the area, a logger can be provided. Call me if you would like to call the net or log. The net meets every night at 5:45 PM on 3900 and breaks up in 20 or 25 minutes. Normally one person only calls it once a week. Join us, it's a lot of fun - great bunch of people scattered around the state.
JOE, WA5TRS

FOR SALE: Heath, HW202, with AC Power Supply, 94/94, 22/82, 81/21, 07/67, 34/94, 52/52/ Also, Regency 10 Channel VHF & UHF Scanner with 9 XTALS. Want a Spectronics Digital Readout for Kenwood TS-520. Ken, WA5DTL, 946-4973.

FOR SALE: Motorola, HT-200, UHF Handie Talkie with 449.1/444.1 crystals, battery and flexible antenna. SID. W5K07. 737-1050

CORA Collector & Emitter

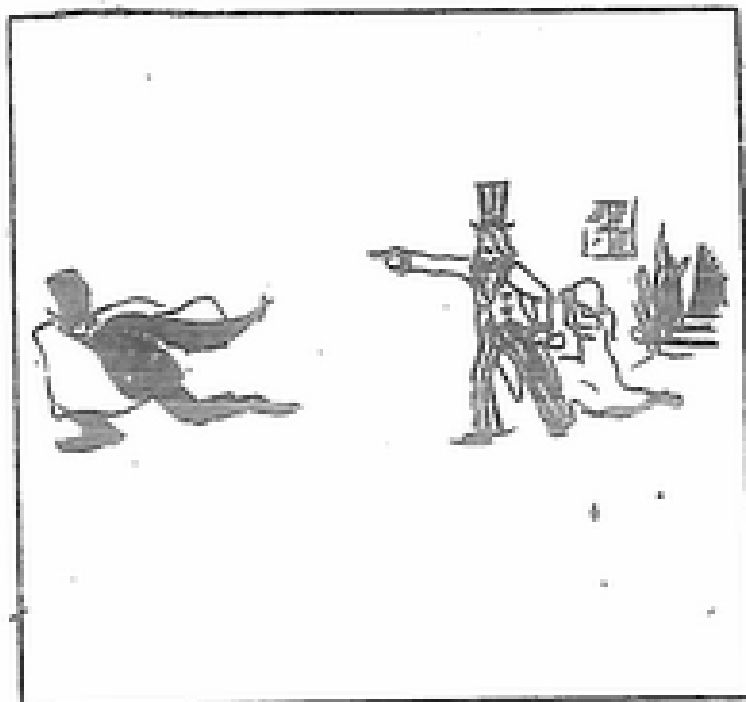
FREE AND NOT SO FREE INFORMATION

Or

"Dis and Datum"

Micheal Salem WASEPK

Information is the key to success in our modern society. The truth of this statement can be demonstrated by the variety and number of pamphlets that are available (occasionally free) from a number of sources, including the federal government. After all, you paid for it with your taxes, why not find out what your tax dollars are being spent for. In order to help close the feedback loop, the Collector and Emitter presents a few booklets and tips that can be obtained as giveaways or at nominal cost. The idea is not original, Microwaves magazine has been presenting a monthly column of this information and it makes very interesting reading. In the meantime, if you have found a source of information (not necessarily related to radio, but anything having to do with survival), write it down and send it in for inclusion in future issues of "Dis and Datum." All selections for this issue are from Microwaves.



If you are threatened by foreclosure, you will receive protection if your mortgage is backed by the Federal Housing Administration. The Government will take over the mortgage from the lender and reduce or suspend payments for up to 36 months. To qualify, you must be at least three months behind in your payments and the default must have been the result of circumstances beyond the owner's control, such as loss of job, illness, or death in the family. Lastly, there must be a reasonable prospect that the payments can be resumed after the relief period.

"Consumer Facts on Air Fare" is a guide designed to help travelers get the lowest fare when booking seats. This booklet, designed by the Civil Aeronautics Board, includes nine specific questions to ask the travel or ticket agent in deciding which is your best fare. The booklet is free from: Distribution Unit, CAB Publications Section, 1825 Connecticut Avenue NW, Washington, D.C. 20428.

"Soundout" is a new mouthpiece which enables you to keep the person on the other end of the telephone from hearing you talk to someone else. This alternative to the hold button is available from: Grayco, 336 Old Hook Road, Westwood, N.J. 07675.

The National Bureau of Standards has issued a booklet to help you protect your home against burglars. "Home Security Starts at Your Door" is offered free from: Consumer Information, Department 94, Pueblo, Colorado 81009.

If you have a microwave oven, you don't need to defrost foods over long hours. An effective technique to reduce bacterial growth and spoilage is to defrost meat in the microwave oven just prior to cooking. Defrosting times range on the order of several minutes to fifteen to twenty minutes instead of the normal defrosting times which might take as long as eight hours.

Here are two tips to enable you to cut down on your utility bills. If your home is airconditioned, be sure that storm doors and windows are kept on all summer. The additional insulation will help to keep hot air outside and cooler air inside. Secondly, when using a dishwasher, try this. Turn the dishwasher off after the final rinse and open the door to let the dishes dry in the air. The Federal Energy Administration states that this can cut the operating cost of a dishwasher by one third.

If you are considering purchasing land with an old house on it, request a copy of the Old House Journal. It offers a 73 (hum, must be a coincidence) point check list listing major defects to look for that could make restoration quite costly and thus the overall buy, not so attractive. Write to: The Old House Journal, 199 Berkeley Place, Brooklyn, N.Y. 11217.

A hot-line has been set up for chemical accidents or emergencies. 1 (800) 424-9300 is the hot-line number for Chemtrac (Chemical Transportation Emergency Center), Washington, D. C.

Dis and Datum- continued

A handbook entitled "Nutritive Value of American Foods" tells you how many calories and nutrients are in common units of each of approximately 1500 foods. The nutrients measured are water, food energy, protein, fat, carbohydrates, minerals and vitamins. This 291-page book is an excellent reference for anyone interested in the basic breakdown of foods. The cost is \$5.15.

Request Document 27 E and send check or money order to:
Public Documents Distribution Center, 5801 Tabor Avenue,
Philadelphia, Pennsylvania 19120.



In the same vein (pardon the expression), avoid crash diets! Two doctors recently reported in the "Journal of the American Medical Association" that patients on quick weight loss plans lost most of their hair over a period of two to five months (Aha, bald headed hams beware). The hair did eventually grow back, but hair loss is not the only negative aspect to crash diets. Besides the danger of illness, often the pounds you lose on this type of diet reappear quickly. Before embarking on any diet, consult your physician.

Here's an excellent tip for anyone who has dealings with the government. Telephone numbers and addresses for thousands of bureaucrats listed by both department and also alphabetically. The Federal Statistical Directory is available from the Government Printing Office, Washington, D.C. 20402. The cost is \$2.60.

An energy tip for fluorescent lights: do not turn them off unless you will be gone for 20 minutes or longer. Unlike incandescent lights, they become more energy efficient the longer they are on. Incandescents should always be turned off when not in use.

The National Bureau of Standards has published a booklet entitled "Color in Our Daily Lives." The purpose of the book is to inform you what colors go best in your wardrobe and how to use color in your home. The 32 page catalog sells for \$1.70 from: Consumer Information, Department 81, Pueblo, Colorado 81009.

"How to Get the Most from Your Antifreeze Coolant" and "How to Avoid Problems with Your Car's Cooling System" are two pamphlets that you might find helpful with all the cold weather we have been experiencing recently. Cost for the two is 25¢. Write to Chemical Specialists Manufacturer Association, Suite 1120, 1001 Connecticut Avenue, N.W., Washington, D.C. 20036.

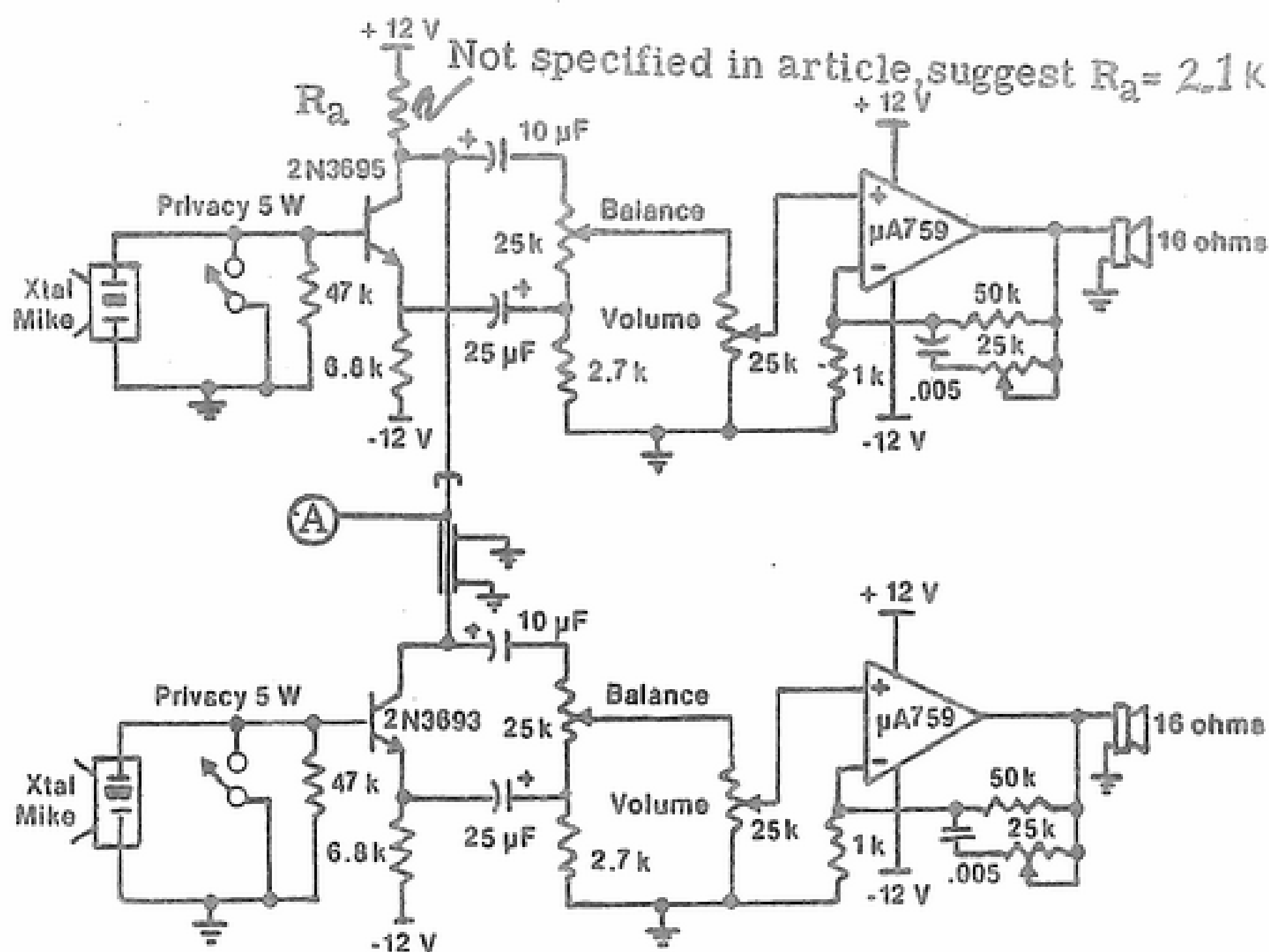
One of the best and still somewhat inexpensive meals is fish. Highly nutritious and low in calories, many people avoid it because they simply do not know how to prepare it. "Let's Cook Fish" is published by the Selected U.S. Government Publications and will supply you with the nutritive value of fish, tips on how to buy it, clean it and properly cook it. Also included in this illustrated booklet are over 30 recipes for broiling, baking, frying, poaching and steaming fish. Cost is \$1.25. Contact: Public Documents Distribution Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120.

For the great mass of cigarette smokers, the National Cancer Institute requests that if you cannot or do not wish to stop smoking, change to a milder brand. Read the test results given in "Report of 'Tar' and Nicotine Content of the Smoke of 135 Varieties of Cigarette." Request it free from: Legal and Public Documents, Room 130, FTC, Washington, D.C. 20580.

Master Charge now provides a service whereby you may wire money quickly. Simply ask the operator for Western Union's toll-free number, state your mastercharge number and authorize payment of up to \$300 to a named individual. The charge is \$6.75 for the first \$50 and \$.75 for each additional \$50. Payment should be received within approximately 2 hours.

Hot off the press for potential C & E authors is a self teaching course text that emphasizes effective communications rather than strict grammar as the primary goal of practical writers. Improved writing skills are taught through a three-fold approach, consisting of a thorough familiarization with theory, practical application of writing principles and an informed criticism of sample letter, memos, etc. Send \$1.40 in check or money order to Public Documents Distribution Center, Pueblo Colorado, 81009 and request 75F. Effective Writing Guide: A Workshop Course.

There is no doubt that the average ham communicates well with other amateurs, but sometimes has trouble interfacing to the outside world (i.e., the XYL). One normal method of communications is via intercom from the shack to the kitchen, but somehow the normal operation with its push to talk requirements leaves something to be desired, especially if turning on a light strains the electrical knowledge of some members of your family. Besides, the normal el cheapo commercial intercom is comprised of nothing more than an amplifier and a humongous switch. Thus, is born the Bi-Directional Intercom, a creature who finds its humble beginnings in the necessity of hands free intercom operation while stalking that rare DX. Lest some of you think that a Bi-Directional Intercom is a project that is purchased at a Fire Island Radio Shack, let me define it as an intercom that goes both ways. Hum, that still doesn't help. Well, it doesn't have a PTT switch and operates much like a telephone permitting full duplex conversation between two points. How can this be done and avoid the bane of most intercoms, i.e. feedback? Well, quite simply as is shown in the schematic below. This circuit was featured in the May 24, 1976 issue of Electronic Engineering Times and shown in article that discussed the new found versatility of new power IC operational amplifiers such as the uA759 and uA791.



Bi-directional Intercom system using the uA759 power op amp

The operation of the intercom is very simple and certainly not unique. The crystal microphone for the bottom unit (for example) feeds the 2N3693 transistor which then produces two outputs, 180° out of phase with each other. The in-phase signal (from the emitter) and the out of phase signal (from the collector) are cancelled in the balance adjustment consisting of two capacitively coupled signals and a 25K pot. Thus no output can appear at the wiper of the balance control which results from the local microphone. The 180° out of phase signal from the collector can then travel along the shielded wire where it appears at the collector of the transistor in the top unit. Having nothing to cancel it, it appears at the wiper of the top balance control and is amplified. Similar operation occurs from the top unit to the bottom unit. Volume control is accomplished by another 25K pot into the input of the uA759 power operational amplifier. A tone control is shown at the output of the uA759 using a 25K pot and a feedback network. The uA759 can typically provide 1 watt at 16 ohms. This is its

maximum power. It only produces .25 watts into a 4 ohm load and .5 watt into an 8 ohm load. The circuit uses a Bipolar supply of plus and minus 12 volts. This is a drawback, but it would seem to me that the same project could be accomplished by making a single ended circuit. This may be more related to requirements of the uA759. In case, you chose not to experiment, it shouldn't be too difficult to whip up a quick bipolar supply with a couple of bridge rectifiers and a transformer and a couple of capacitors. It might be a good idea to bypass these voltages close to the circuit. Good regulation might be called for, especially on audio peaks and high current draw, but it doesn't seem like it needs to be too critical.

The privacy switch shorts across the local microphone and provides a "listen only" mode. It seems to me that it might be possible to add more units to the intercom by just attaching them to point A at the shielded wire, however, some compensation of R_a might be necessary in order to maintain the same gain. It would also appear that the out of phase signals could be coupled capacitively and a separate resistor such as used in the top unit could be added to each unit.

I haven't built this circuit yet, but since I rediscovered it in a pile of magazines a few days ago, K5HMD mentioned that he also was thinking about constructing one to replace the old beat up circuit he uses between his shack and the kitchen. We haven't made a PC board yet, but that is the next step in the project. The use of the power IC operational amplifier simplifies matters considerably since it needs very few components external to its package to operate.

Micheal Salem WA5EPK

FOR SALE: ICOM IC-21 with new narrow filter. Covers Air Force and Army MARS as well. Crystalled for 07-67, 67-67, 16-76, ~~20-82~~, 82-82, 28-88, 88-88, 34-94, 94-94, 94-34, 37-97, 52-52, and 58-58. \$245. CRYSTALS for ICOM rigs at \$7.00/pair with the IC-21 or \$8.00/pair separately: 01-61, 04-64, 64-64, 10-70, 13-73, 19-79, 25-85, 31-91, 46-46, 63-03, 81-21. ALSO GLB 400B Synthesizer for use with ICOM. 5 KHz steps, any split, from 140.000 - 149.995 MHz. \$150. Will consider package deal for the above. MAC, K2GKK/5, 405-672-4947.

01-61, 07-67, 10-70, 19-79, 25-85, 63-03, 81-21, 58-58,

NEW MEMBERS AND CORRECTIONS TO CORA ROSTER T 64, 67, 82, 88
Corrections and New Calls Underlined

WB5AUF	W. A. Crook	3448 N.W. 18	OKC	
W5CPI	Jack Harkins	2204 N. College	Bethany	789-9398
W5FQH	Robert McClain	1815 N.W. 27	OKC	
K5JL	Jay Liebman	3801 MacArthur Blvd N	OKC	
K5JWZ	Richard Gilliland	6512 Los Altos	El Paso	
WA7KGU	Robert Shaw	908 Elmwood Dr	Edmond	341-4763
WA5KLB	Lynn Wagoner	2720 Manchester Dr	OKC	751-6694
WB5LYI	Art English	9604 N.E. 10	MWC	732-8401
W5MIP	Robert Stramp	10121 Oakpark Dr	MWC	737-3158
W5NI	Bill Hulse	447 E. Carson Rd	Mustang	376-2125
WB5NIY	Don Templeman	10305 Paisley Rd	OKC	
WB5PEC	Glen Franklin	512 S. Macomb	El Reno	
WA4PLG	Charles Kennamer	6613 S. Miller	OKC	
W5QAC	Cecil Borin	3244 S. Klein	OKC	634-1960
K5SUD	H. E. Hutchins	3721 S. E. 26	Del City	
WB5SVD	William Walker	3025 S. E. 20	Del City	
WB5SYM	Hugh Coleman	1701 S. Air Depot	MWC	
W5TQG	Paul Mead	1515 N.W. 45	OKC	
WB5URW	Jack Perry	3108 N. W. Grand Blvd	OKC	842-5606
WB5VXL	Robbie Reid	5300 E. Lindsey	Norman	
WB5YCA	Arggle Hoffman	2936 S.W. 50	OKC	681-7989
WB5ZKV	Lawrence Langer Jr	4209 N.W. 22	OKC	942-3733
WB5ZLE	Forest Lawson	Rt 2, Box 74	Yukon	354-3818

THE ZANY NEWS FREQUENCY

Joe, WA5ZNF

Get well Rosalind [sic]

SLIDE, CLYDE, SLIDE - - The 35mm slides for CORA's project to tell the local story of amateur radio to CBers, civic clubs, schools, etc. are coming in to Hobe Burgan, WB5MLN, Phone 751-1646. Well, they are not pouring in but at least Clyde, WB5CPa, down Washington way sent in a bunch and several others have "promised".

Hobe needs more, especially of OLD operations, shacks, equipment. But he can use all types. If you have some black & white prints that would look good we can make them into slides and return the originals to you--that applies to color slides too, so you won't lose them. Kodacolor negatives can be used too.

He is getting close so needs some help in setting up places and times to show and impress non-hams. Call him.

* * * * *

CLUB MEETINGS - - At least most of those I have attended, start off with an icebreaker to recognize visitors and make them feel welcome as well as to let the members show that they have been active in amateur radio, brag about their accomplishments or conquests - but - last Friday's Oklahoma Central ARC meeting was different. Everyone present just introduced themselves by call and name and sat down, that is until the last one, Ken, WB5KHU couldn't stand it any longer and proudly and loudly announced that he had been a father for 13 1/2 hours. He repeated the 13 1/2 hours more than once but never got around to revealing the baby's sex. In any event baby and mamma are doing fine.

* * * * *

HAMBURGER HELPER - - is supposed to be real good stuff but what is needed around here is HAM HELPERS. Re-read the cut line on the front cover and let's start a list of people who will help all of the new novice that are springing up all over the place, due largely to the fine schools that area clubs have been holding. Call Joe, WA5ZNF, at 737-1044 - if you will help - and a list will be published in the CORA C & E each month.

* * * * *

FOUND: Stolen ICOM IC-22A. Serial Number has been ground off but holder of radio advises that radio can be identified by modifications, crystal pair locations, etc. If you have had an IC-22A stolen or know someone who has, contact Mac, K2GKK, at 405+672-4947 for further information. See WB5MPH

* * * * *

Rte # 1 Box 5
Cleveland, OK

ARE YOU SET FOR SET? - - If the post office does its usual good job of delivering C & E (I usually get mine the morning after it is mailed) this will get you thinking about participating in the annual Simulated Emergency Test Sunday afternoon. Listen on the local repeater frequencies after 12 noon Sunday, also on 3900. Of course if you are one of those unlucky ones and don't get this issue by Saturday the 29th, this is to advise you that you probably missed a good exercise and some good emergency training, try again next year.




REMINDER!

A BIG RED "X" HERE WARNS THAT ACCORDING TO RECORDS FURNISHED BY YOUR CLUB SECRETARY YOU ARE DELINQUENT IN CLUB DUES. NEXT MONTHS CORA COLLECTOR/EMITTER MAY BE THE LAST UNLESS YOU CONTACT THE CLUB INDICATED ON PAGE TWO AND RENEW OR CORRECT THE RECORDS.

SECOND CLASS POSTAGE PAID
AT OKLAHOMA CITY OK

POSTMASTER: Send Form 3579 to:
CORA C&E Box 15013
Oklahoma City OK 73115

FEBRUARY HAM HAPPENINGS						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 00	GROUND HOG DAY 2	3	ACARC 4	5 CLUB FEB
6	7	MORI 8	9	10	11	12 RADIO DONUTS & FB
13	14 	AUTOPATCH 76'ers 15 00	16	17	OKLA CENTRAL ARC 18	19 AMATEUR OFFICE, RED CROSS HQ'S N. HAEVEY - 9:30AM-?
20	HOLIDAY - WASHINGTON'S BIRTHDAY CPE 21 PASTE-UP	22	23	24	CORA 25	26 OKLA CENTRAL SPONSORS C GSO'S EYEBALL
27	28					

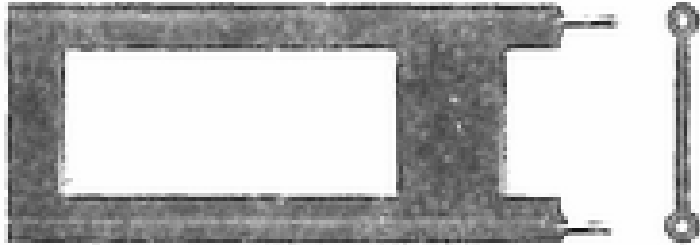
See page 2 and/or individual club sections for details

amateur radio
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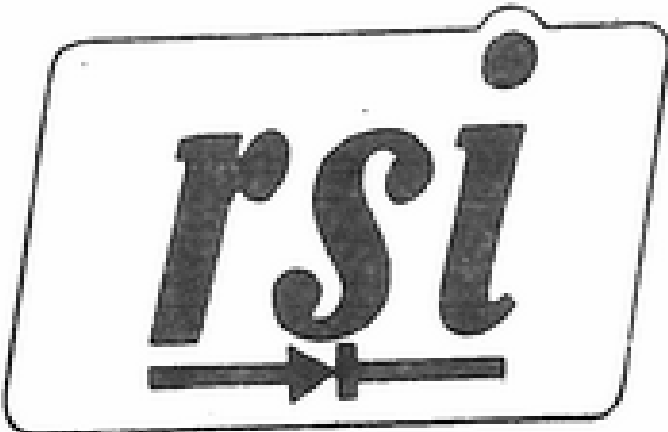
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