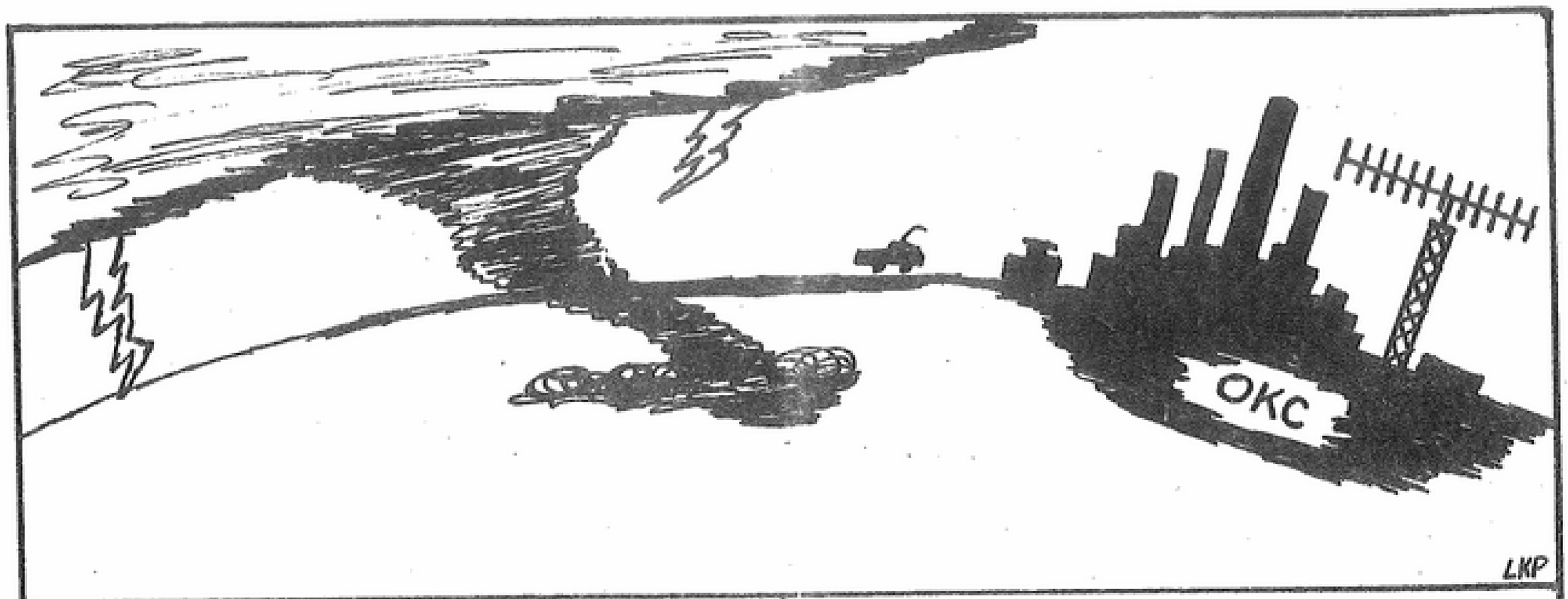
CENTRAL OKLAHOMA RADIO AMATEURS
COLLECTOR AND EMITTER

50¢

Volume 10 FEBRUARY 1984 Number 109

*** I N D E X ***



NATIONAL WEATHER SERVICE

TORNADO PREPAREDNESS WEEK

FEB 26 TO MAR 3

OPEN HOUSE

FOR ALL AMATEURS

AT NWS, WILL ROGERS AIRPORT

TUESDAY FEB 28

2:00 – 4:00 pm

& 7:00-9:00 pm

WEATHER MEETING

DATE:

FEB 21

TIME:

DOORS OPEN 6:45 pm

MEETING STARTS (Promptly) 7:15 pm

PLACE:

KWTV Ch. 9

7401 N. KELLEY AVE.

GETTING TO KNOW YOUR FELLOW MEMBERS

Continuing the saga of our fine couples who make up our membership in the Autopatch Club, it would be most inappropriate to wait any longer to expound on the lives of the beloved George and Vickie Adkins, ADIS and N5DLM. Almost everyone is quite familiar with this lovely couple, but there are a few things about them that perhaps aren't too well known. Knowing this, I felt it would be nice to share some of these important details with the rest of the membership.

In keeping with tradition, let's start with Vickie. She is a most charming individual, a cute little gal with a turned up nose and as she likes to put it, a very well rounded person. However you want to take that statement is entirely up to the reader. You can determine for yourself if that means an hour glass figure, or if she is capable of doing many things on her own.

Vickie comes to us from the far north. Since most folks feel that anyone who lives north of the Oklahoma City limits is a Yankee, she fits right in. Of course, anyone who would marry up with someone with a Yankee call like Adis, would have to be a Yankee. At any rate, on one of his various business trips to Enid, George found this little gal and finally talked her into becoming his bride. This took a lot of persuasion on his part, but after finally agreeing to help her get her ham ticket, she agreed to marry the old boy.

Vickie is a real talker. Once she heads out in her 280Z and gets that dude in high gear, she quickly grabs the mike and starts yapping. She never met a stranger, for on more than one occasion, she has been heard bending the ear of many folks passing through our fair city.

Even though she is a constant talker, Vickie is also a very sober and reserved individual. She is very easily embarrassed, especially when someone starts telling off colored stories. She quickly turns red in the face as she grabs for her note book to write down all the punch lines, wanting something to remind her so she won't forget the story.

Vickie has had an interesting career. For some time, she was a professional model. She has modeled clothes all over the country, in such various places as remote islands of the South Pacific. However, probably one of her most noted appearances was in the summer of 1983 at the famous Kerr Park in downtown Oklahoma City, where she so daringly modeled everything from strapless gowns to winter ensembles. George, who is also a professional photographer, has made numerous photographs of Vickie and these photographs have graced the center folds and front pages of many magazines, including such world wide publications as CORA's C & E.
Since her retirement from modeling, she has worked as a legal secretary, and now desires to expand on her legal knowledge and career. She has entered law school at one of the leading legal institutions in the state of Oklahoma, the University of Oscar Rose.

Now, what about George? Well, George is known around the world as Mr. DX. Not only has he made contact with every known country in the world and has several DXCCCC certificates adorning the walls of his ham shack, he's made several dx-peditions to corners of the world that no one knew existed.

George has one of the finest set-ups at home of anyone in town. With the help of his two computers, he is able to keep track of all the big dx'ers. He has them programmed to do his job if he is unavailable at the time and to even wake him up at 4 in the morning if there is a rare one on. George's antenna is something else to see. The tower itself is completely legal, but for him to put up the antenna, not only did he have to get a building permit, he had to obtain an easement from the city in order to rotate the thing. It is so long that when it is pointed either north or south, it covers up half the street behind his house.

For some time now, George has served as the President, Vice-President, and the Secretary-Treasurer of the most famous and perhaps one of the largest dx clubs in the world, the Oklahoma City DX Club. Just what purpose the club serves, I do not know, other than serving as a time for local members to get souced up.

Being such a highly trained individual and one with outstanding managerial qualities, George decided several years ago to become full time QSL manager for some of the more noted dx-peditioners. One of the main reasons for this of course, was all the publicity and notoriety he could obtain in dx circles. Any time George hits a key or a mike button, his signal is recognized all over the world.

George has just returned from one of his annual dx-peditions. Often times, Vickie joins him on these trips, but was unable to make this one. As one would suppose, it takes a lot of bucks to pay for one of these exciting vacations. Just how does George do it? Well, just in case the ready cash is not lying around and mildewing, he has a smooth way of talking the federal government into subsidizing the trip. There is always an island in the remote corners of the world that has a few too many wild house cats on it or they need to go there and count the number of birds living on the island, so they will send a wildlife conservationalist to do his thing and old George and the boys get to go along for a free ride and provide the communications for the group. Not bad, it is? Rumor has it this could be George's final trip without a certain young lady named Vickie. No more ulcers while George is away playing.

Have you ever noticed the funny way George and Vickie walk sometimes? Many folks have commented about this and wondered why they sometimes give the appearance of having at one time served in the German Army, raising their feet so high and kicking their toes in the air as though they were doing the German Goose Step. Well this has a simple explanation. George and Vickie are world famous Cowboy Dancing instructors around the Oklahoma City area. They have taught schools in such famous lounges as Cowboys, Cowgirls, Red Dog Saloon, Long Branch Saloon and even the Myriad. They have taught more folks how to do the Two-Step and Cotton Eyed Joe and stepped in more piles of you know what than anyone. So, the reason they kick so high when they walk is simply to clean off their boots from something they stepped in.

One of George and Vickie's favorite past times other than amateur radio is their dog kennel. They own one of the highest priced stud dogs in the world. Old Duke has won more ribbons than you can count, and his pedigree reads something like a Sears catalog. His standing stud fee is enough to buy a boat to China, and his waiting list is a mile long. Duke shows partiality to George. When George has to be out of town on company business, old Duke goes completely bananas, and it is all Vickie can do to keep him under control. George will usually have an extra snort or two on the plane home so he will be in the right frame of mind to play with Duke and to settle him down. The conversation gets interesting as poor Vickie tries to explain to George about the problems she has had with Duke while he was gone.

George and Vickie seldom see each other at home. They normally catch up on their family business and all the important activities of the day, such as their jobs and school activities, or what the kids are going to get to eat for supper on their way to or from work in the rush hour traffic.

All seriousness aside, George and Vickie are really two nice people to know. Vickie is the present Secretary of our club and George has served as our Vice-President. I believe that George was one of the best Presidents CORA ever had, and did an outstanding job. We need several more folks like George and Vickie around.

K5NK

CORA Collector & Emitter (USPS 116-150) is published monthly by CORA Inc. 1020 Arthur Drive, Midwest City OK 73110. SECOND CLASS postage paid at Oklahoma City OK. SUBSCRIPTION: CORA members$3. Others $6 yr.

POSTMASTER: Send form 3579 to: CORA, PO Box 15013, Del City OK 73155

Mg. Editor: Joe Harding, WA5ZNF,737-1044
Circulation: Bob Graham,WB5NSV, 677-8685

the OK Section — A R R

THE AMERICAN RADIO RELAY LEAGUE

art roberts w1gom section manager

Greetings to the OK Section! I know it's been a long time since I've made this column. As most of you know, I have been tied up with school. Well, I am still at it, but I have an easier schedual this semester. Hopefully I'll be able to be more active and I might even get up an antenna or two!

I think most of you will agree that 1983 was a very special year for Amateur Radio:

The STS-9 shuttle with W5LFL aboard.
The successful launch of OSCAR-10.
The opening of the 10 Mhz. band.
The begining of the Tele-conference Nets.
The 10 year license term.
The begining of Volunteer Examiners.
The passage of the Amateur Radio bill with the help of K7UGA.
Another good year of Public Service in many areas, especially the stora nets.
Two execellent hamfests: Ham Holidays and Green Country at Western Hills.
The laying to rest of the "no code license."
Plus many Amateur Radio Clubs around the state that have grown and improved.

Of course with the good we have the sad moments: The sudden loss of W4KFC. The equally sudden and tragic loss of our friend WB5PWZ, Bob White. I know we have lost several other amateurs last year and we will miss them all.

The new year looks like an interesting time. The Volunteer Examiner's will be getting organized. Two great Hamfests to go to: **Green Country** at Western Hills Lodge, **May 19-20. Ham Holidays** at Lincoln Plaza, OKC, **July 20-22.** Also many club events around the state. Those of you around OKC should get out and see what some of the other groups are doing. This state has some real fine clubs. **HAPPY** and **SAFE HAMMING** in **1984!!!**

THE ZIA CONNECTION

The Zia Connection is a system of linked repeaters, dedicated to full time linked service. It is an open system, available to all amateurs, on a continuous 24 hour per day basis. The only time the system would not be available, would for reason of technical difficulties, or if your local input repeater were removed from the link in order to take care of a local disaster of extreme proportion.

Control of the individual repeaters and the link transmitters and receivers at each site is the responsibility of the owner of that particular repeater and his designated control operators. There will be no control via the links, of the other repeaters in the system.

Ownership of the repeaters and the link radios, in most cases will be private and therefore beyound the political control of any group. If a club, or other group, desires to make their repeater a participating station in the system, the operational criteria and technical standards and characteristics of the system will have to be met and adhered to. The system will operate as if it were one "super repeater" with very wide area coverage, and no area will have preference over another.

Consideration will be given to specialized op- erations, such as ten or six meter repeaters or transceivers, open autopatches that would be available via the link, ect.

Operationally, the system will be no different than if you were working through a single repeater. The repeaters will have their individual time out settings, but will be matched as closely as possible. If you time out your local input repeater, the balance of the system will continue to operate in a normal manner. The link transmitters are not timed with the repeater, nor is the repeater timed from the links. The only identifier that will be heard is the one of the local repeater. The ID's of the link equipment and the other repeaters are notched out before being repeated on the local output. Most of the repeaters will have a courtesy tone beep, at about 1 second into the carrier delay, after unkeying into the repeater. This is a reminder to allow time for other stations to break in. The dropout time from one end of the system to the other will be on the order of 200 milliseconds, so it will be difficult to tell which repeater a station is inputing to the system from. There will not be a series of multiple squelch bursts.

The Zia Connection linked repeater system operates in a full duplex mode. This means that signals can go both ways on the link at the same time. Operationally, this is very desireable, as it allows instant breakin, and prevents doubling with another station, if the users are operating their own station in a duplex mode. For most operators, this will involve having another receiver (scanner or another transceiver) connected to another antenna, so as to be able to monitor the output of the repeater while talking into it. A common configuration would be to have a scanner connected to an outside antenna that is in a strong signal receiving location, and the transmitter to an indoor antenna or a small groundplane at rooftop level. Use as little power as necessary to put a quieting signal into the repeater, and this will cut down on the desense of your monitor receiver. Microphone gain has to be reduced to a minimum amount necessary to modulate your transmitter to 5khz. peak deviation, so that you can turn your monitor receiver level up for comfortable listening, without creating audio feedback. Try it. I'm sure that in a short time you will feel lost when you don't have duplex capability.

Most of the repeaters within the system are privately financed. This involves a tremendous amount of time, plus capital outlay. Also, there is a continued expense for power, site fees, equipment repair, and trips to the mountain tops. Anyone desiring to participate in any way, should contact me personally. There are ways that anyone can help.

Thank you for your interest, and enjoy your operating. Fraternally.

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Tel.(505) 358-2105

Edmond Amateur Radio Club
P.O. Box 76262 / Okla. City, Ok. 73147

Stan Van Nort - WB5UIY

1984 OFFICERS

Officers of the Edmond Amateur Radio Club for the 1984 year have taken office and already have their work cut out for them.

This year's President is Stan Van Nort, WB5UIY, past Secretary-Treasurer and President. Stan's involvement in the Club began in 1976.

For a second consecutive term as Vice-President, Glenn Cochran, WB5MLX is filling the bill. Glenn has been a very active member since his retirement with the Phone Company (Your guess as to what to call it now, after divestiture--Ed.).

Secretary-Treasurer for 1984 is Kay Northcutt, WD5DYJ. Kay has been a member since 1977, and, according to Larry Dillard, serves as the first female officer elected to the Club. Kay's ability to watch the checkbook comes from a long-standing job of watching her husband spend money for radios.

First priority for the new Executive Committee will be to formulate a budget for the coming year. From this, a more realistic evaluation can be made for a possible dues increase.

In other Club news, meetings have been re-scheduled for the second Monday of the month. Odd-numbered months are for business meetings and even-numbered months for social meetings as in the past. --de WD5DYI

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NEXT MEETING FEBRUARY 13
Location: Adeline's Restaurant
E. of Rockwell on Northwest Highway
****

TELECONFERENCE SLATED FOR MARCH 1

Edmond Amateur Radio Club, Inc., is proud to announce its participation in our fifth Teleconference Radio Net.

The nation-wide net is presented to the amateur radio public by the Honeywell Amateur Radio Club of Minneapolis, Phoenix, and Billerica, MA. The net connects over 200 repeaters in the US and Canada for its presentation. Several of the repeater facilities are connected for "talk-back" capability. This allows amateurs from across the country to ask questions to the net.

The March 1 net topic will be "Amateur Radio and the Law," which will assemble a panel of legal authorities to discuss laws as they affect you, the amateur. Specific topics are not known as of press time, but antenna height considerations must surely be brought up.

The Teleconference Net will be presented on Thursday evening, March 1 at 7:30 p-m. Tune-in around 7:15 to hear pre-taped interviews with panel members and the interconnect and check-in process.

Also connected on a link basis will be the KI5P Repeater in Fairview. This allows hams in Northwest Oklahoma to listen-in. In addition, EARC plans once again to simulcast the net on 75 Meters. Frequency will be announced within a few days of the net. - de WD5DYI

Club Station WD5AII

EARC MEMBER HARRISON NABS CONFIRMED QSO WITH COLUMBIA

Rod Harrison, WB5DSH, of Oklahoma City, is floating on air after receiving confirmation from ARRL of a contact with the Space Shuttle Columbia.

Harrison's contact was on Orbit 147A on December 7. The eight-minute availability window was from 1426 to 1434 UTC (8:26 to 8:34 a-m, CST).

Although Rod's callsign was not audibly confirmed from space by Owen Garriott, W5LFL, a tape recording made by the astronaut contained his call clearly enough to confirm.

"Just because I didn't hear my call didn't mean I wasn't being heard. I thought I'd just wait to hear the list," Harrison said. It seems it was worth the wait.

Rod credited the knowledge obtained by the AMSAT organization as making the difference. His long-time membership in AMSAT, plus the AMSAT computer program were plusses in his operation.

Harrison pointed out that less than 10% of the world's amateur population belongs to the AMSAT organization, but from records obtained so far, 10% of all the contacts were with AMSAT members-- a credit to the education obtained from satellite tracking.

WB5DSH heard of his accomplishment by phone from Bob Moore, KA5ETA. Bob had heard George Adkins, AD1S, read the list from the ARRL Bi-weekly newsletter on the K5JL 22/82 repeater.

Mr. Harrison is one of two amateurs in the State of Oklahoma to be confirmed "the hard way," meaning being heard on the right frequency at the right time. The other contact was with a YL in Boise City.

Odds of being heard at any given time within an access window are phenomenal, considering the many thousands of amateurs clogging the airwaves with their own signals.

Pre-arranged contacts were made with several hams in Enid, Garriott's home town. Through the efforts of the Enid ARC, Garriott was able to talk with his mother, who still lives in Enid.

Rod said that the pre-arranged contacts used an unpublished frequency. Among them were the Enid QSOs and the Johnson Space Center ARC Station W5RRR. He also pointed out that he knew the operation frequency of the Enid contact from seeing a closeup of WA7UIB's Azden rig on a television news report a few days before!

It is also suspected that contacts with W1AW at ARRL Headquarters and King Hussein of Jordan, JY1, were made on these undisclosed frequencies.

Harrison's setup included a Kenwood TR-7950 into a VHF Engineering 150 Watt Amplifier, into a KLM-16C antenna with Azimuth-Elevation control. A CDE TR-44 handled the azimuth rotation and an Alliance U-100 mounted at a 90-degree angle took care of the elevation control. His AZ-EL plotting was computed on a Texas Instruments TI-99 computer with the AMSAT Tracking Program.

Information on each orbit path of importance was shared by Rod on local repeaters. Local hams were able to benefit from the AMSAT computer program, which proved to be very accurate.

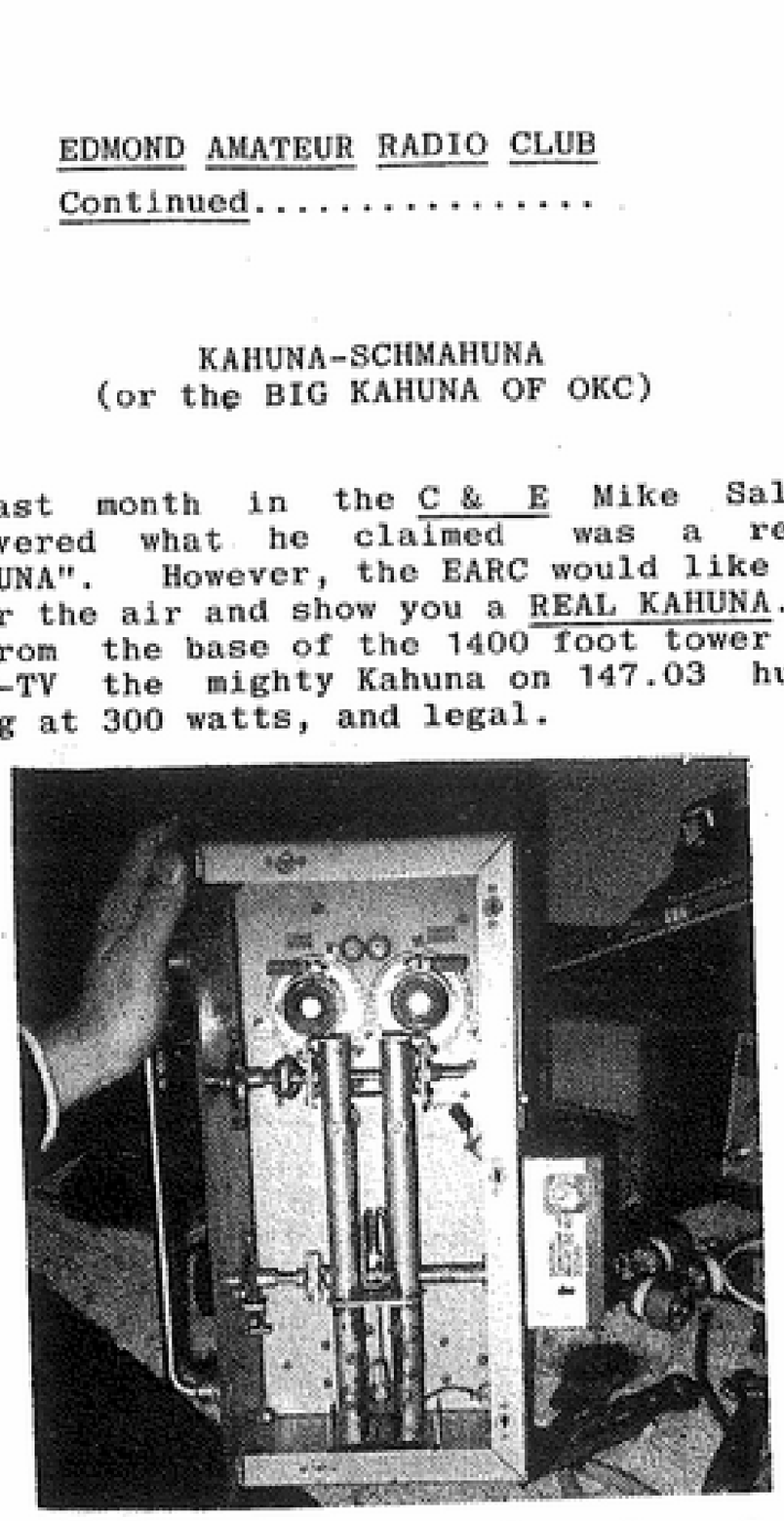
Rod is waiting for the special QSL Card from NASA. At press time, the cards were running far behind. Check future issues of Collector & Emitter for photos of this historic piece of amateur radio history.

Congratulations, Rod, from the members of Edmond Amateur Radio Club. If anyone deserved the honor, you did! --de WD5DYI

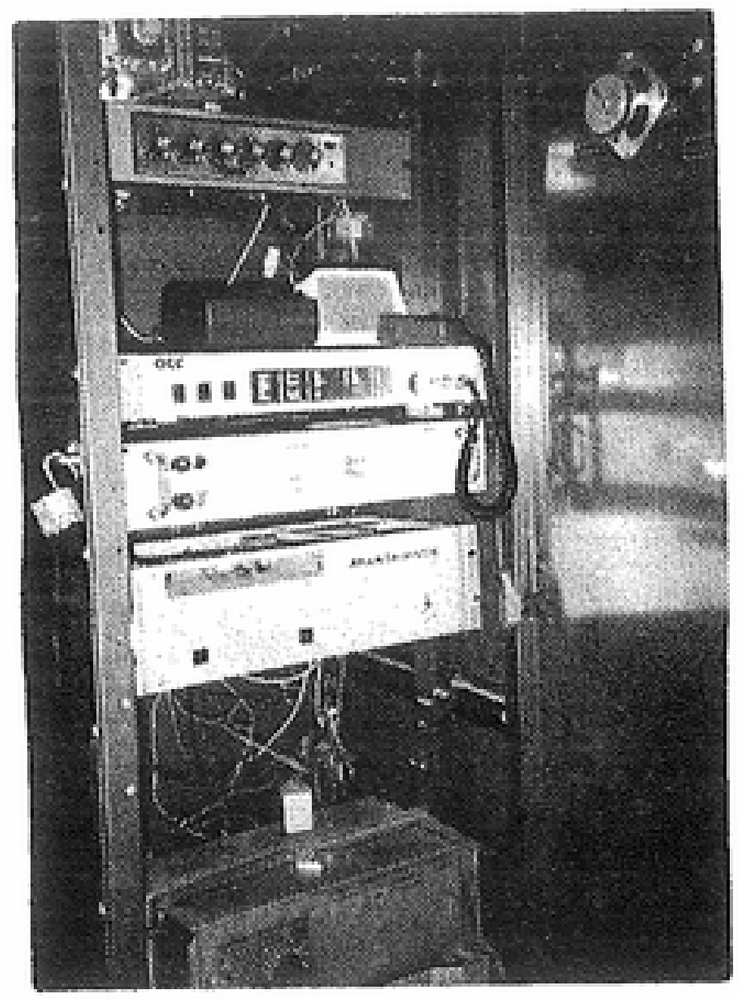
KAHUNA-SCHMAHUNA
(or the BIG KAHUNA OF OKC)

Last month in the C & E Mike Salem uncovered what he claimed was a real "KAHUNA". However, the EARC would like to clear the air and show you a REAL KAHUNA.

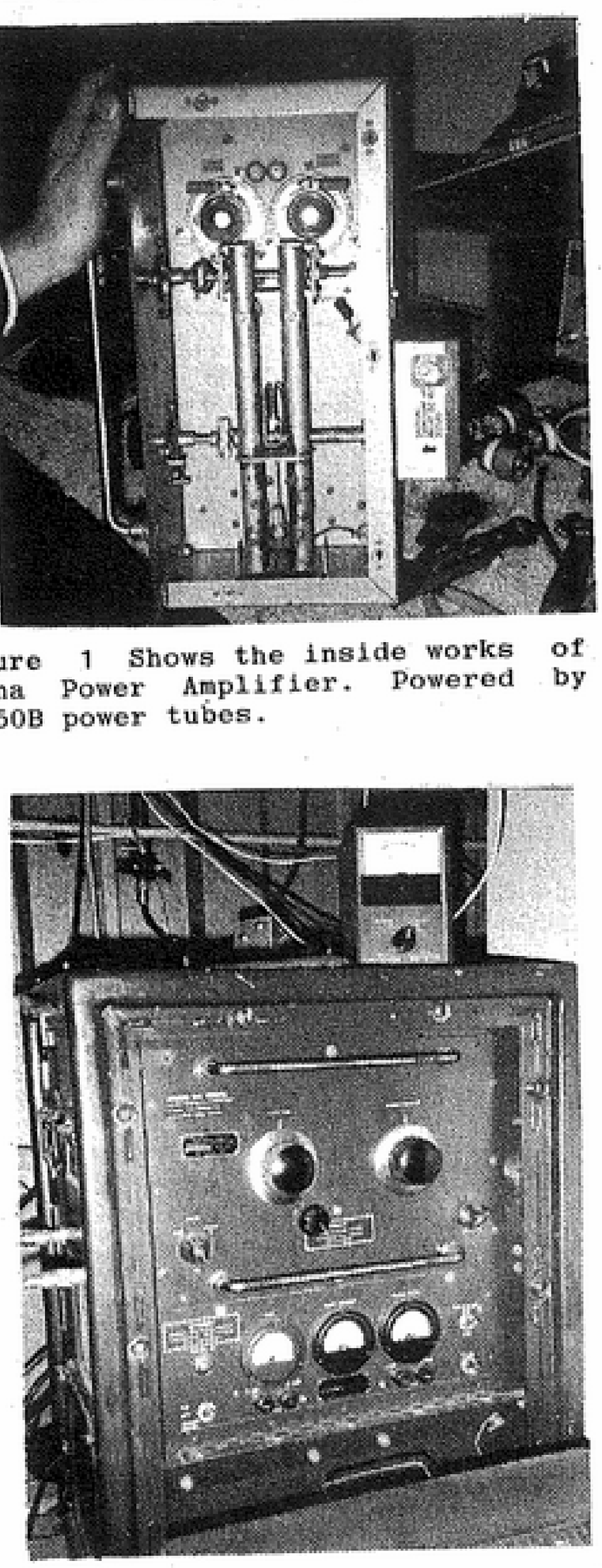
From the base of the 1400 foot tower of KOCO-TV the mighty Kahuna on 147.03 hums along at 300 watts, and legal.



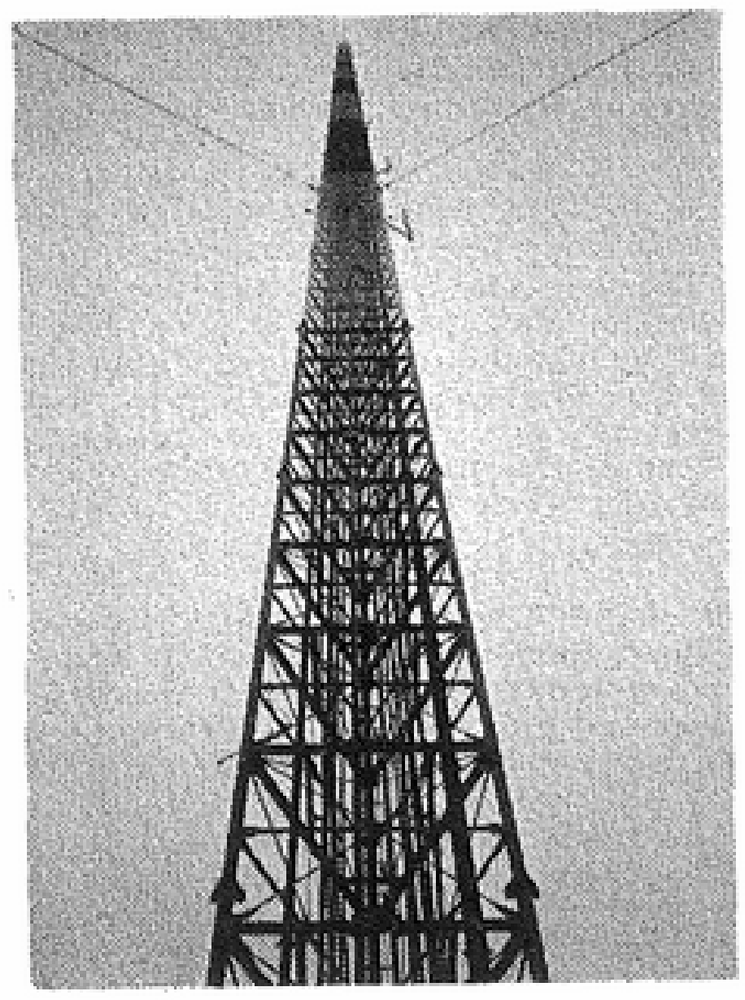
Picture 1 Shows the inside works of the Kahuna Power Amplifier. Powered by two 4CX250B power tubes.



Picture 3 Inside the cabinet. Top right is the UHF Link transceiver. Below that is a Shure audio mixer. Next is the famous ACC computer controller which is supporting a speaker and a tape message machine. Next down is a 12 volt supply and another tape announcement machine. At the bottom is the GE-Mastr Pro Transmitter. (Note the spaghetti wiring technique)



Picture 2 The Kahuna in action. Note the watt meter indicating 300 watts. The rig here is a Motorola AM-494, military surplus.



Picture 4 Ground view of the 1400 foot monolith, erected as a tribute to the REAL KAHUNA.

While Mike Salem brags about the Norman machine being a Repeater's Repeater, one can easily see that with the KAHUNA Power Amplifier pictured above, this is no doubt the REAL KAHUNA of KAHUNAS. For those that like statistics: GE Transmitter runs at 100 watts to drive the power amplifier. The PA output (as noted above) is running at 300 watts. This goes into a 7/8 rigid air-dielectric transmission line with only 29% efficiency. (Made in 1964, it could use improvement) At 960 feet, the line is connected to a DB-224 antenna. With all the calculations done by our Trustee Dennis Orcutt, we end up with 197 watts ERP. Typical radio horizon is 43.8 miles ground wave. However, it can be heard in a mobile unit at times up to 65 plus miles away...EAT YOUR HEART OUT MICHAEL. --de WB5UIY

We'll See You at the Weather Net Meeting !

Club
NEWS

VHUG

January Meeting

The January meeting was cancelled because of bad weather. Six hardy souls made it anyway and decided there was insufficient attendence to conduct an official meeting and elect officers for this year. Next month's meeting will be the first of the year so officers will be elected. Be sure and make it.

I was in San Diego so this month's club news comes courtesy of W5KE, who is one of those hardy souls. Joe, K5JB, Secy

Packet Radio Update - Hardware

The latest news is that the text for the 76er's column this month was sent via packet radio from KB5XN to K5JB's where it was printed. Prior to that the latest news was that three additional TNC's will be arriving soon from the Tucson Amateur Packet Radio (TAPR) group and we are sure ready for that. In the last month, Jim, KB5XN, and I have had only a couple of opportunities to give Packet some on-the-air testing and I discovered how to make the GLB Terminal Node Controller (TNC) connect with itself through the Tucson TNC operating in repeater mode. (See Jan 84 C&E. At the time I prepared that article, I reported the GLB was unable to do such a thing cause I couldn't do it and the literature didn't address it.)

A couple of weeks ago I received a postcard advising that TAPR was ready to ship the balance of our order for TNC's near the end of January so I fired off a check immediately. This means there will soon be at least five TAPR TNC's and one GLB TNC on the air in the Oklahoma City area. The most recent edition of the TAPR Status Register (their newsletter) contained a humorous article regarding the effort to get the first hundred kits ready to ship. When they were all stacked and ready for the shipper the writer had second thoughts about sending the 'babies' off to new homes to be raised by strangers. I can certainly understand the feeling because those 'babies' were obviously put together with tender loving care. I hope the others who receive them enjoy working with them as much as Jim and I have.

The first time Jim and I really got the things working good was on December 29th when he succeeded in severely rolling off the high frequency response of his IC-230 transmit audio. I am now convinced that all our problems were caused by not recognizing and compensating for the IC-230's phase modulation. At higher audio frequencies, a phase modulated rig creates greater frequency modulation than it does with lower audio frequencies. (It is all done with trigonometry.) Our problem was that my receiver was not wide enough to accept the high tones generated by the TNC's modem if audio level was reasonably high enough for the low tones. We had NO problem with any of the frequency modulated rigs we used.

That first night we successfully connected was a gas. Even his son James, alias Luke Skywalker, got on the keyboard and let a bunch of packets fly. Having had some RTTY operating experience, I was ready and transmitted the traditional 'Brag' file. (They used to be called 'Brag Tapes'. Sigh, that's progress.) Jim retired for the next few weeks to try and clean up the TRS-80 Model 1 so it wouldn't create so much interference to the VCR equipment. He might have an update on that.

While Jim worked on the Model 1, I made a little RF tight box for the GLB TNC to enable it to work in a strong RF field and cleaned up some of the cabling so it could be used portable in conjunction with the IC-2AT. I discovered that in the VADCG (Vancouver) protocol, addresses in the range of hex 81 to 9F were often used for digipeater inputs and addresses of hex A1 to 8F were used as digipeater output addresses. By simply using an address of 129 or so and using a fictitious call (K5JB1) to prevent direct connection with the digipeater, I entered my secondary call as both calling and destination station and the TAPR TNC reacted perfectly as a digipeater. I had a mess on my hands using the same call on both TNC's; the GLB connected with itself and the digipeater tried to connect also. I had to pull the plugs and start over. When the GLB is upgraded to the AX.25 protocol, this problem won't exist because it provides for call extensions in the address fields.

The next advance in digipeating occurred when KB5XN and I made our second good Packet QSO January 15. We used VADCG protocol and we connected the GLB to his TAPR TNC through my TAPR TNC operating in digipeat mode. I was operating completely on battery power and had achieved portability. The Radio Snack Model 100 was used as the I/O device on my end.

With this success, I became so sure of myself I almost loaded the whole shmear in my briefcase to try it out in San Diego. There is a Digipeater in Laguna Beach but it would be 50 miles away and it would be operating in AX.25 protocol so that would have been a loser. However, I have calls of individuals in San Diego who have been using that system and I figured a phone call to one of them might get somebody on the air using VADCG protocol. At the last minute, I came to my senses and left the room in the briefcase for some other stuff I wanted to research for this month's C&E. (See Packet Radio Update - Software, this issue.)

During these initial experiments, KB5XN and I have been using one of the 30 KHz simplex frequencies on two meters (147.51...there goes the neighborhood). Our operation has not been extensive enough to cause anybody any heartburn (I don't think) but I am sensitive to the obnoxious noise these things make and want to set up operation on a 15 KHz channel as soon as we start operating more often. The ideal frequency, from a good neighbor standpoint, would be 146.70 which is already clobbered with bleeps and blurps by the folks playing RTTY and Bell 103 modem tones. Unfortunately, from my location, I am being crunched with intermod from the 30 KHz repeaters and 147.70 is almost unusable. I haven't determined whether my equipment has gone sour or something on the roof is doing the mixing but I am having problems with odd order IMD to the 9th order, it seems. I believe i could light a number 47 on the end of the coax when one of the big gun repeaters fires up anyway so I am not too concerned about it.

The frequency some of us were using for linking cross band equipment was a dandy because there didn't seem to be anybody else on it and there was no problem from intermod. It was 146.415 and I think the closest operation will probably be on 146.40, a repeater input in Moore. Because of the critical nature of Packet radio bandwidth, Packet transmitter's deviation will have to be closely controlled so I don't anticipate ever causing interference to that repeater. An occasional over deviating user of that repeater will be heard but won't cause cause much problem with packet operation because the TNC will just keep trying until it succeeds. I would be interested in thoughts others have on the subject.

Another subject that needs some thought is the preferable way to create a port on two meters so operators running Async can get in on the Packet action. Of course, the first problem that needs to be solved is an agreement on tones. Running all kinds of tones, speeds, word length, etc., makes design of a port

nearly impossible. Talk to two people and you get two opinions. "The only way to go is Bell modem tones...everybody's got a modem!" or, "Naturally RTTY tones, 170 Hz shift is the way it is done on Amateur radio. That's the way God and Kantronics intended things!"

The second problem is whether to locate the TNC at the repeater site or link it somehow to an operator's home where it can be more easily managed. If it is to be linked, should it be done on two meters or 220 and above? Any attempt to run 2M frequencies at the repeater site other than the repeater's input and output frequencies would be very difficult because of required RF isolation. Which brings up the possibility that the Packet input/output could be via the repeater's primary frequencies. There would have to be some fancy control work to enable and disable the Packet system and cause it to hold the Async portion of its operation until the frequency is clear. Remember that its Async port is full duplex and the typical user is not capable of full duplex operation with his radio.

Fun to think about the options and sketch the various possibilities on napkins, match book covers, business cards, etc. How about some ideas on the subject?

Jim and I are going to gather enough gear to put on a demonstration at next month's Aeronautical Center Club meeting. If you're interested, come along and watch. Joe, K5JB

Packet Radio Report - Software

At the suggestion of the footnote on the first page of the GLB Terminal Node Controller (TNC) instructions, I ordered a copy of the Book, Synchronous Packet Radio Using the Software Approach, Vol. 1. It was available from Richcraft Engineering Ltd,, Chautauqua NY and was suggested reading for anyone interested in learning how the GLB TNC was able to function without special purpose hardware other than the radio modem interface (XR-2211 - XR-2206 set). I received it just in time to glance through it and toss it in the briefcase before heading out for the San Diego beaches. My intention was to use it as a prop while I ogled the beach bunnies during the lunch hours and use it as an excuse to stay out of the bars and the inevitable shoptalk that goes on forever in the evenings. Oh well, so much for intentions.

I did look the thing over pretty well, however, and can give you somewhat of a sketchy outline of what it contains so you can decide whether you want to look further into it.

The book is a GBC (not GLB) bound document that has the appearance of a college thesis, three quarters of an inch thick, or so, printed on both sides of the 8 1/2 by 11 pages. It was authored by Robert M. Richardson, W4UCH, who obviously is quite agile in Z-80 code. It's thesis appearance quickly disappears once one starts reading and finds it is not a cold, factual document but one prepared after extensive experience in coding and testing the Packet program on Radio Snack TRS-80 Models 1 and 3. He tries very hard to be informative in terms that a relatively unsophisticated, but otherwise qualified radio amateur, should understand. There is some editorial license taken in opinions presented regarding VADCG vs AX.25 protocols but the author is quite fair and candid in his opinions. For a fact, the AX.25 carries a lot of excess overhead baggage in its addressing scheme but it is necessary for expansion of the mode and development of level 3 protocol suitable for amateur radio. W4UCH is working on Volume two which will cover the AX.25 protocol.

If you don't have a Trash-80, you had better be a good hacker yourself because the program covered in this book makes ROM Calls native to that machine. The author describes functions performad by those Calls so a good programmer would be able to find similar subroutines in his equipment or write them, as necessary.

The first seven chapters are a good introduction to synchronous data communications with references to the IBM literature from whence Synchronous Data Link Control (SDLC) and High Level Data Link Control (HDLC) came. There is a satisfactory explanation of Packet protocol (VADCG), synchronous data encoding and decoding, NRZI encoding and bit stuffing and enough information for the Trash-80 owner to build, or buy, interface hardware needed to connect the computer to the radio and perform the necessary interconnection using what is called a Port Zero encoder/decoder. He describes suitable modem circuitry using XR-2206 for modulating and XR-2211 for demodulating. He discusses the option of purchasing a VADCG modem kit (approximately $80.00) or a Circuit Board Specialists' AFSK generator ($40.00). He includes schematics of both these options so the reader can decide which way to go. If the latter choice is made, the constructor will still have to build the demodulator.

The book contains an elaborate explanation of the Frame Check Sequence (FCS) which is sent near the end of a Packet and appears to be generated like the CRC-16 Cyclic Redundancy Check in some block transfer schemes used between computers running file transfer programs. (See November 83 C&E.) After reading his explanation, I am more confused than ever and I am not sure he knows how it is done but he darned sure made it work. The problem is that manufacturers of SDLC integrated circuits apparently do not freely divulge information on how the Frame Check Sequence is calculated. The author had tried published schemes but they just didn't work. Carefully following the IBM algorithm worked, so what can I say?

(There are 192 lines of code for calculating the FCS and I am puzzled why it took so much when a typical modem program I pulled for comparison took only 36. Like I said, there were too many distractions at the beach to permit my full understanding of the author's methods and problems he was trying to solve.)

For someone who is interested in how digital computers (micro, that is) can be manipulated to control external devices, this book will painstakingly explain every step of the process. Much of the bulk of the book is the program listings. One thing that contributes to the bulk is duplication of the assembly listing because he published the source code, well remarked, and repeated the source code, without remarks, in what he called the object code listing. It looks like what most assemblers call a print file except the remarks are not included. I have no problem with the fact that both listings were included. The only reason object code might be included is for the person who doesn't have an assembler and doesn't intend to modify the program much. (I presume the TRS-80's have monitors that permit entering object code.)

There is a much easier way for you Model 1 and 3 owners. The Source and object code for the programs included in this book are available on disk. They cost $29.00 on a double sided 35 track disk, $34.00 on two single sided 35 track disks; and for the model 3, they cost $29.00 on a double density 40 track disk. The book costs $22.00. (Nobody ever said software was cheaper than hardware, it is just easier to hide the cost from your bookkeeper.)

There are additional books available from the author for you TRS-80 aficionados that apply to amateur radio. Disassembled Handbook for TRS-80, Volume III contains Morse and RTTY programs (Model I) and Volume V contains 'Advanced Baudot Radio Teletype' (Models I & III). These books are $20.00 apiece and it appears that programs described therein are available on disk. The complete address is Richcraft Engineering Ltd., #1 Wahmeda Industrial Park, Chautauqua NY 14722. Joe, K5JB

ACARC
January Minutes

The January meeting of the ACARC was called to order on Friday January 6, 1984 at 8:00 PM in the Flight Standards Building on the Aeronautical Center. There were approximately 30 members and guests present.

A discussion was started concerning participation of the club membership and a vote was taken to postpone election of club officers until the February meeting.

At 8:45 it was decided to break for coffee, doughnuts and some good old visiting.

John KA5JCX
Sec. ACARC

FILE Ø

WELL, THE JANUARY MEETING CAME...AND WENT. THIS WAS THE MEETING WE WERE GOING TO HAVE OUR ANNUAL ELECTION OF OFFICERS FOR 1984. AS YOU CAN SEE FROM THE MEETING MINUTES, THE ELECTION DID NOT OCCUR AS PLANNED.

LARRY, K5RJR, AND MYSELF SINCE SEPTEMBER HAVE BEEN TRYING TO PUT TOGETHER A SLATE OF OFFICERS FOR THE YEAR. WE'VE EACH HAD A SLATE PUT TOGETHER...AND THEN DISAPPEAR INTO THE THIN, BLUE, ATMOSPHERE. AS A RESULT, ON MEETING NIGHT WE CAME UP WITH A "CLEAN" SLATE.

IT SEEMS WE ARE SUFFERING FROM A DECIDED LACK OF COMMITMENT FROM THE FULL MEMBERS IN THIS ORGANIZATION TO CONTINUING WITH THE CLUB.

WE ARE ENTERING A CRITICAL TIME FOR THE CLUB...THE PRESIDENT OF THIS ORGANIZATION SHOULD BE A FULL-TIME EMPLOYEE HERE AT THE CENTER, BECAUSE THERE IS A NEED FOR LIAISON WITH CNTER MANAGEMENT. OUTSIDE THAT REQUIREMENT, THE OTHER OFFICERS CAN COME FROM THE RANKS OF FULL MEMBERS WHO ARE RETIRED.

WE HAVE EXCELLENT TURNOUTS AT THE MEETINGS, AND OUR MEMBERSHIP IS HOLDING UP QUITE WELL IN THIS ENVIRONMENT OF DECREASING ACTIVITY IN THE AMATEUR RADIO WORLD. WE HAVE INTERESTING PROGRAM FARE, AND SUPER FACILITIES FOR THE CLUB...SO WHERE ARE THE PEOPLE TO SERVE AS OFFICERS, AND DIRECT THE ACTIVITIES OF THE CLUB FOR THE COMING YEAR???

LARRY AND I STILL DON'T HAVE A SLATE OF CANDIDATES FOR THE NEXT MEETING. WE'VE JUST ABOUT STOPPED LOOKING. WE ARE AT A LOSS AS TO WHAT TO DO. WE NEED THE PEOPLE IN THE ORGANIZATION TO IDENTIFY THEMSELVES FOR OFFICE.

IF YOU ARE INTERESTED IN THE FUTURE OF THIS FINE, OLD, RESPECTED CLUB...THEN COME TO THE FEBRUARY MEETING, AND GET YOUR VOICE IN THE DISCUSSION, AND HOPEFULLY, ELECTION OF A SLATE OF OFFICERS FOR 1984. NOW IS YOUR CHANCE TO HAVE A HAND IN THE POLICY AND DIRECTION OF THIS CLUB...

LETS SEE YOU, AND HEAR FROM YOU AT THE FEBRUARY MEETING. WE NEED YOUR SUPPORT

73...ROBBY AAØO

FOR SALE: HEATHKIT HW-101 5 band XCVR, matching P/S, speaker, wattmeter, microphone. Working condition. $250.00. Bob AF5Z, 733-3429.

The VHF club held their Christmas dinner on December 17 at the Red Cross and graciously invited members of the ACARC. Those who shared the evening included:

Bill & Dorothy Noland
Helen & Jim Williams
Charlie & Marie Greene
Jim Williams
Garnett & Ellard Foster
Rob & Gio Runyon
Tom Stinson
Jim Buswell
Bob & Jean Pace
Thomas & Helen & Jennifer Mangham
Steve & Clara Stevens
Gene & Rosy Halley
Joe K. Harding & Frances
Joe Buswell
Paul Asplin
Amy & Lysa Baker
Mike Minns
Mark Gailbraith
Ralph Bartow

Charlie Greene took some notes at the meeting and I'd like to share them with you.

--Everyone was really glad to have Jean Pace back from the hospital.

--Tom worried all week about someone bringing bread - There was plenty.

--Steve and Clara made it in from Guthrie - glad they could make it.

--Jim Williams finally found a TV that he couldn't fix.

--Joe Harding and Rob Runyon created such a glare with the light reflecting off their bald heads that they had to be powdered with chalk!

--Bill Noland said his wife told him she would divorce him if he became bald--He says when she is not looking, he pulls out another handful.

--Ellard and Garnett are waiting til cold weather to go to Switzerland (when you read this, I bet they've left!)

--Marie bought her poodle Coco a toy dog and he's afraic of it.

--Rosie said that 1/6 of all those at the party smoke.

--Mark gave a demonstration of the new mod. IV mod. 80 portable computer.

--The punch went over great. It's success was largely attributed to the imported french spring water donated by Gene & Rosie.

--Jim Williams took up contributions for crippled children through the shriners.

--There was no business, just a lot of fun and a great feed!

John KA5JCX

On the day I received my amateur radio license, I was as proud as proud can be to become a member of such a group of "professionals".

I was under the impression that the "Amateur" Radio Service meant that it was not commercial, but "professional" in all other ways....WHAT A JOKE!.....What I learned during the time of the shuttle orbits, has made me completely ashamed of many of my fellow amateurs.

I am only a Technician (in grade less than a year) but before even considering participation in this event, I thoroughly researched the procedures for listening and transmitting, obtaining data on the orbits, etc. I certainly did not want to do anything illegal or even anything which might interfere with other amateurs attempts to contact W5LFL. I wish other amateurs (most of whom were much more experienced with radio communications and hold a higher grade than I) would have done likewise.

I personally feel that those who were deliberately transmitting on the listening frequency during the passovers of the shuttle, should have their licenses revoked! No better were those who entered into controversy with or condemnation of them. (For some of these, their licenses could have been taken for the language used!)

Some of those transmissions were probably just mistakes made while attempting to transmit and receive on the same radio, but many others were acting blindly, without

CONTINUED →

getting factual information. Either way, they were jumped upon immediately, without being allowed time to realize their mistakes. I will admit, as the mission time elapsed, the interference became less an less.

Not just the local amateurs were guilty of this type of transgression. While attempting to get information about the orbits, I tuned to WIAW for a report. There was a "radio operator", using the call KC4TT, who was making a complete "fool" of himself and all amateurs by making statements about how he was on that frequency first and would not get off for WIAW. I cannot imagine an Advanced Class Amateur Radio Operator acting in that manner! (If indeed it was an Advanced Class and not a "boot-legger".)

Just a little consideration for your fellowman (in this instance, your fellow radio operators) would make a lot more friends, good feelings, and a much more enjoyable hobby for everyone.

PLEASE DON'T BRING OUR RADIO SERVICE DOWN TO THE LEVELS REACHED BY THAT "OTHER ONE".....

KA5ODI, Rosy

kay COUNTY ARC

Well, this sounds like a repeat of all the other articles, but Merry Christmas and a Happy New Year to all, especially the big ones playing with their new toys.

The Kay County Amateur Radio Club had their Christmas dinner last week and all that braved the very bad weather (sleet and snow) had a good time. There were about 30 people present including Marsh's girl-friend Valerie.

There was a drawing for the flower at the head table which Jim won (WD5DPR Harry's son). And there were gifts (donated by Elbridge Orr W5KLR) given away to the ones present by drawing also.

The club has acquired 24 10-M F.M. tranceivers and these radios have been given to club members. The club is going to set up a 10-M repeater. More information will be forthcoming in a later article. Seventeen sets of Simplex crystals have been ordered and should be available in about four weeks. Members who would like to have one of these radios should contact WB5YRN Delbert (general class or above, please).

The club participated in the Ponca City Similated Emergency Test with Police Reserves, Ponca City Hospital, Ponca City Ambulance Service, anc Conoco First Aid teams. The city wishes to thank all who participated in this test. A lot more was learned in dealing with an emergency.

Since Rick WD4CEP, the regular reporter, is in Tennessee during the Christmas holidays looking for more girlfriends, I agreed to write the article for him. I sure hope they have better weather there than we have had here.

7, 3's Happy New Year

Delbert WB5YRN

FOR SALE: Heavy duty triangular steel tower, 19" base. $150.00. TA-33JR Mosley 10/15/20M, 3 element beam, new,$100.00. John, 745-4751.

FOR SALE: One 90' Rohn tower w/guys. Also TX power supply with 600v / 225 ma output. WDXA 392-5458

WANTED: SB220 (working or not) or Homebrew 2KW Linear. Also, pair 3-500Z (new) tubes.
Jess Speer (Norman) 405/ 321-7302

The South Canadian Amateur Radio Society

SCARS HOLDS JANUARY MEETING.....

The regular monthly meeting of the South Canadian Amateur Radio Society was held on January 13th at the Red Cross building in Norman, with seventeen persons attending. At the meeting, the club decided to have a dinner meeting in February instead of the regular Saturday meeting. The Dinner Meeting will be held on Feb. 14th (remember your sweetheart) at 6:30p.m. at Kelly's Restaurant on Main Street in Norman. The club also decided to look into the Volunteer Examiner Program that the ARRL is setting up.

In other meeting events, Bob Rabin, KA5MIZ presented a program on Shortwave Listening. Bob played some tapes of various stations that he has heard and discussed the merits of some of the shortwave receivers that are available.

The club was pleased to welcome some visitors to the meeting. Three visitors were present from the Postal Training Institute, as well as one other visitor. Visiting the meeting were: Dennis, WD4HRO; J.L., WA5SKP; and Roy, KC5SJ; as well as Richard, KA5PYM.

REPEATER NEWS.....

Due to the help received from several talented people, our repeater is in much improved health. More work is apparently needed, however we are well on the way to making the needed repairs.

SCARS DINNER MEETING.....

As written above, SCARS will hold a dinner at Kelly's on Main Street in Norman in lieu of the regular monthly meeting for February. The dinner will be on February 14th at 6:30p.m. We will order from the menu as individuals rather than as a group, and reservations are not necessary.

-wa5rpp-

I HEARD.....1S Vibrating down Meridian.....TAW uses gasoline for deoderant.....CTT would like gentleman's wages.....FZK made a profound statement..... ETA wasn't sure about that.....FEX with wax in his ears.....CSM got blown out of the saddle..... DDB felt bad about that.....NZS finds it hard to be a housewife.....BQX isn't current..... M got cold feet.....LBI is back.....CTS is a real laugh.....DDB chasing a blond..... GKK wouldn't want to chase one.....ETA listening on three frequencies.....M didn't get his golf ball for Christmas.....CSM looking for bad apples.....FEX shot down a helicopter.....BJS is calloused.....DDB knows the feeling..... YLZ never expresses himself.....M would like some slow.....CZN lost his mind.....FEX will learn to keep his mouth shut.....YLZ W.A.S. on 11 meters.....GKK didn't want to screw up..... LBI surrounded by patrolmen.....CSM had smelly boots.....BQX has a bb brain.....M has a powerful duck.....BQX got the snot beat out of him .....GKK making a snotty remark.....TAW has a big cold nose.....CSM confused about that .....BJS with the hungries.....FEX rolling along.....CWT forgot where he was.....LBI warning everyone to watch out.....JYT tries to be nice.....TAW wiggled his coax..... NZS is a maitre d'.....WM anyway, yea, huh, you see, I uh, uh, you know, it's uh, uh, really, uh, I mean, it's like, you know, it's uh, but, you know, he's uh, you know, in other words, so uh you know..... DDB fired up his fly.....GOM looking for somethin to nibble on.....LBI is irregular.....ETA is a real lover of cats.....and a lot more.....K5NK

Salem

'NO-CODE?" NO WAY SAYS FCC!!

Perhaps one of the most controversial topics in the amateur community got an airing before the FCC a little over a month ago and after some discussion, the Commission reaffirmed a long standing policy of requiring a proficiency in International Morse Code before turning new amateur operators loose on amateur frequencies. And it looks like the topic is dead for quite some time to come.

The issue was an agenda item before the Commission on Wednesday, December 14, 1983 and the result was an unexpected and stunning rejection of the no-code concept. This is a result that has been in the mill for almost 10 years since the FCC first proposed the no-code concept back in 1974 when they first proposed a "No-Code Communicator" class of license in Docket 20282. And it now looks like the no-code concept has once and for all dropped out of the marketplace. The Commission adopted the Report and Order denying no-code and terminated the proceeding. Ray Kowalski, Chief of the Special Services Division was quoted by the W5YI Report shortly after the meeting that the Commission drove a "stake into the heart of Dracula and we will never again see a no-code amateur proposal in our lifetime. This issue is over--once and for all."

Maybe a little bit of deregulation and Reagonomics is not bad in this instance. After all, in the face of deregulation, it is the idea of the Commission to let the marketplace govern or regulate the service. The only problem here was picking the marketplace to only include the present amateurs in the service and they overwhelmingly rejected a no-code concept. It seems that those interested in no-code had no lobby to speak out for themselves. In this instance, the FCC let amateurs decide whether or not there would be a use to a class of licensees who could not demonstrate a proficiency in morse code. Despite all the fears of the commentators that no-code was inevitable, it was good to see that 5,000 comments on this issue (running about 20 to 1 against no-code) had a substantial effect on the Report and Order. The result appears to be a "governing with the consent of the governed, almost democratic and perhaps just a little bit radical. The Commission has recognized (just like all other commentators) that a 5 wpm code test is not an unreasonable "burden and does not appear to have critically affected the entry of new licensees into the Amateur Radio Service. "The FCC concluded "members of the general public, particularly younger students with developing interests in electronic technology, radio and computers, are capable of learning the international Morse Code at the proficiency rate of five wpm with undue difficulty."

What does this decision forebode for amateur radio? Well, actually nothing since it preserves the status quo. It simply means that there will not be an influx of amateur radio operators into the present service who have not demonstrated a proficiency in the code. It will still be an entrance level requirement. Use will not be as important perhaps since there are many amateurs now who perform many useful functions in the service, but could not demonstrate a present proficiency in the code. But that will not and is not the test . It will merely be demonstration that the person has acquired a certain amount of discipline of study before becoming an amateur radio operator.

I don't view it as significant that some people say that the use of the Morse Code has no relevance to certain aspects of our hobby. It doesn't really make any difference to say, for instance, that someone who is interested only in computers should not be required to learn the Morse code to use a radio. This is identical to the argument that a person interested only in voice communications should not be required to learn the code. SSTVers and other special interest users should not be allowed the same argument. Rather, all amateurs will continue to be bound together by the common heritage of the Morse Code. And that is a "discipline" necessary to get a license. Engineering or electrical science is a "discipline." It is something that you might need to know and learning it can become a skill. And for some, after the pain of learning, one develops a certain pride in the accomplishment and muster a further desire to gain and demonstrate greater profiency.

The Meeting

It is significant that Robert S. Foosaner, the Private Radio Bureau Chief elected to present the item to the FCC at the meeting. The 14 page order was actually written by John Borkowski, a staff member. Also present was Ray Kowalski, the Chief of the Special Services Division.

There were basically three considerations that were addressed in the Report. First, is the Amateur Service growing? Second, is the code an unnecessary barrier to young computer oriented individuals? And third, is the slow-speed Morse code requirement discriminatory against handicapped individuals.

These considerations address only in part the original questions raised in the first Notice of Inquiry and Notice of Proposed Rulemaking. Some of the earlier discussions centered on the relevance of the code to certain classes of users.

Growth of Amateur Radio

Is the amateur service growing? Yes, according to the staff report. In 1930, there were 30,000 licensees. In 1975, there were 300,000 licensees. In 1983, there are now over 400,000 licensees. For Fiscal 1983 (September 1982 to October 1983) there was a net gain in numbers of 4,339 operators. (20,940 new operators against a loss of 16,601).

Well, I guess that numbers are OK, but I would look at more than numbers than to say that the amateur service is growing. Is it growing as a service? Is it performing an important role and doing it better than before. Are the new members of the service coming in as technically minded and qualified public service workers?

I think that a general increase in numbers means an overall improvement in public service capability to the public, I am not sure that there is not more to it. Amateurs must fulfill the purposes of Part 97.1. Amateurs should have a "per capita" growth in their technical ability and operating skill during public service work. I think that because of th influx of new operators, that the "per capita" quality of the typical amateur operator has declined. Yet, overall, because the shear numbers have increase, the service overall benefits. Additionally, improvements must be made that increase the overall capability to communicate. Modes and other advances also increase the public service potential. The advent of 2 meter FM and repeaters has almost made universal local public service communications a reality. New modes of communications such as Amtor and Packet have increased the reliability of communications. Section 151 . of the Communications Act states that one of the purposes of establishment of the FCC was the development of a

rapid, efficient and reliable communications system. I certainly think that, in a small way, amateurs are contributing.

So, while there has been an overall decline in the quality of the amateur radio operator, the total benefit to the public has increased because of the large numbers who have been coming. And in addressing the question, Is amateur radio growing? one should take into account that this 1300% growth from 1930 to the present means that there is a dedicated group of people to who the morse code is not an insurmountable object impeding getting a license.

Growth is not always good. When it gets a certain size, it can become uncontrollable. There should be no doubt that the code is an inhibitory factor in growth. A code-free license would cause an inevitable influx of new amateurs to the service, but would they be quality and qualified operators? Japan's explosive amateur radio growth (from 70,000 in 1965 to over 1,000,000 in 1982) is no doubt attributed to their easy to get codeless license. One of the comments stated that 95% of all Japanese hams hold the telephone class (codeless) license (as do 1/3 of England's amateurs and 40% of Germany's amateur operators). The Japanese codeless license and any eventual benefit it may have is not really all that it is cracked up to be. A recent article (August 1983) in 73 Magazine by an american living in Japan the past 20 years (Ron Waite W9PQN) indicated that Japanese amateur radio is a rather undisciplined service. In the article, he estimates over 500,000 operators and growing every day with 88% of the Japanese operators no-code Novices, limited to 10 watts in power. He characterized the no-code class as the reason "that, for the most part, Japanese amateur radio is more or less an extension of the citizens band, including its numerous abuses, bad manners, overcrowding, and general lack of knowledge of what amateur radio is all about."

A subsequent letter (p. 98, January 1984 issue of 73) took Mr. Waite to task for his indictment of the problems in Japan and Mr. Waite responded with an answer to the letter. He reiterated that 2 meters and 15 meters at night and on the weekend was a collection of party tapes played on the air, deliberate repeater interference, and obscene noises transmitted on the air. Both of the magazine articles are very enlightning when taken in the context of the discipline and control of the Japanese society and people. There can be no doubt that there has been a dilution of the quality of amateur radio operators in Japan. There is a certain anonimity about the use of radio. There will always be certain cretins who will jam and slam and talk dirty and unless you have very sophisticated kind of DF equipment, you will never find these people. So what does it take to prevent these things from happening? It takes a filter to screen out those who cannot exercise the necessary discipline for proper operation. Something that is hard to get is more appreciated than something that is easy to get, human nature being what it is. The Japanese Denwakyu class (Novice) has added large numbers to the Japanese amateur population, but it is a throughput according to Waite. Almost 42% of the new operators fail to renew their license upon expiration. And of those that do renew, upon the second expiration, only 25% of those renew. That leaves 11% of the original amateur population still intact which is probably about the same as the growth in the United States over a comparable period. Compare this to the numbers given earlier for a loss of 16,601 amateurs in one fiscal year, an attrition rate of less than 5% a year. The phenemenol growth in Japanese radio is a result of the massive influx of new operators with the Japanese equivalent of Dick Bash running theory memorization classes year round. The slightly more orderly growth process in the United States results from the imposition of the code as a "filter" to weed out those individuals who are interested in becoming amateurs and staying amateurs. The 90% attrition rate of the Japanese amateurs after the second renewal is indicative of how these codefree operators view their privileges. The 11% that do stay in are probably the equivalent of the growth that occurs in the U.S. Japan "filters" its amateurs by letting them on the air and they burn out or perhaps they don't want to put up with the overcrowding and behavior.

There is probably no doubt that the Private Radio Bureau looked long and hard at this example of a code free license before issuing its proposed Order. This is not an indictment of the Japanese people either for it is clear that similiar results would occur in any country and probably worse. The enforcement problems in a time of budget crunches and minimal enforcement now mandates some controls on the growth and size. Another "problem" is that we have many procedural and substantive safeguards that make enforcement difficult. A "revolving door" amateur population increases the problems in enforcement many times.

Barrier to Handicapped Individuals

All amateurs opposed to no-code should be very grateful to the comments filed by the Courage Handi-Ham system. In is only in the presence of the facts that informed decision making can occur and the FCC's inquiry into the barrier that the Morse Code poses to handicapped individuals were apparently completely defused by the comments. They stated:

> We must strenously object to the argument that people with physical handicaps are prevented from being able to successfully complete a Morse code examination. Extensive experience in training over 5,000 severely handicapped people proves otherwise. Of perhaps even greater significance is the reason WHY so many severely handicapped radio amateurs put forth tremendous effort to learn the code at speeds that permit fast and reliable on-the-air communications. For many, the Morse code is the only means of communications available to us.

These comments among others indicated that the code was not a significant barrier to them and that for the most part, handicapped individuals wanted it retained. In fact, the Handi-hams comments said that they have encountered only six cases over the last 16 years where a physical (as opposed to a mental) disability absolutely prevented an individual from learning the code at the prescribed levels.

Although most people who commented said that while they didn't want to bar individuals who were handicapped from the Service, that it should not be done in a manner that affects the general population as opposed to the target group. Here is a place where some specific legislation surgically "targeted" toward the specific group such as a special codefree handicapped license might be the best approach rather than a "meat cleaver" approach that affects the overall population.

The code should not be a barrier to physically handicapped individuals (there are many more who claim a mental barrier to the code, but that is not the same, many just haven't taken the time to study

or don't want to learn the code). My experience with handicapped individuals is that these people demonstrate a lot more drive and determination to get a license than the average population. And quite frankly, that is not a bad characteristic to have in a participant in the amateur service. That is not to say that because of their handicap that these people must pay a higher price to get into the amateur service, they pay the same price, but it requires more effort, work and skill on their part. The question should also be answered whether an "accomodation" should be made to permit easier entry into the amateur service even though the code is in some way an additional barrier? The comments filed by Handi-Hams and quoted by the Commission don't indicate how many handicapped individuals started training for the license and gave up because of the difficulty. Is it wrong to require an additional burden on these people that may be unrelated in a way to their use of the service? Perhaps these questions will be addressed in the next rule making process.

Code No Barrier to Computer Interests

The final consideration before the Commission was whether or not the code was an unnecessary barrier to young computer oriented individuals? They answered the question as basically No. Five words per minute is a minimal requirement. There should be no difficulty in learning the code at this level for a truly motivated person. One of the commentors cited an Army Technical Manual (TM-11-459) and Department of the Air Force Technical Order (TO 31-3.-16) that indicated that the average person can learn to send and receive Morse code with about 15-22 hours of study, based on sending and receiving proficiencies tested at a one continous mistake-free minute.

This is essentially correct in my experience. In studying for the Novice, I spent about 30 minutes an evening for about a month to get 5 words per minute. I know one individual who accomplished the appropriate code speed for the Technician Class license in less than 10 hours over two weeks. He took the exam before an FCC examiner. Those who require longer study times probably are not practicing every day and just like anything, a skill that is not used can atrophy. The key is regular and periodic work on the code on a daily basis. Oh, you might take a weekend off, but you have to keep hammering away. And to someone wanting a license, the code does seem unnecessary because they see no immediate use or have any immediate desire to use it. The new comprehensive code test is on the one hand harder and also easier. You must now copy a full five minutes to answer the questions, but your copy can be incomplete if you are good at figuring out the tests. The comprehensive exam is an aid to some extent to physically handicapped individuals who cannot write down the code, but can copy it in their head. Nevertheless, five words per minute is minimal.

It was at this point in the proceeding that W5YI quoted Mimi Dawson, one of the more recently appointed Commissioners who took issue with the numbers presented. She said that she was trying to get an amateur license so "she would have personal insight into the service" and had invested about 15 hours "listening to those dot-dash tapes" and wasn't doing very well. In response to an inquiry from Chairman Fowler, she indicated that she still did not know any of the letters, yet!

I don't know what code she is trying to learn, but it must not be the Morse Code because I would be ashamed to admit that I still didn't know the letters after almost 15 hours of study. At the risk of comparing her efforts to some of those mentioned here, I would have to say that something is wrong here. It may be that a busy Commissioner who might not get to practice every day for 30 minutes can close on 15 hours of effort and still not know any of the letters, but this doesn't translate for the average person. Intelligence odviously is not an issue and I would bet that she has an appreciation for music. Both of those factors help in the learning of the code. An ability to "hear" the code can be developed. I thought about sitting down and writing her a letter urging her to not give up and to keep trying. There should be no reason why an FCC Commissioner can not get a license.

It was at this point in the meeting that Foosaner trotted out a couple of the traditional arguments for the use of code as the "mode of last resort." It is not limited to use on the amateur band in the HF regions, but rather a large number of users are using CW in the VHF/UHF bands for EME, tropospheric ducting, meteor scattering, earth orbiting satellites, etc., which will generally only work with Morse Code. It is a necessary and useful tool to the amateur operator. More significant is that the code should not or will not be a barrier to someone willing to spend hundreds of hours learning how to use and program a computer. One of the commentators pointed out that there really is not a lot of overlap in "interest" in computers and radio communications. This is really true. K5JB pointed out to me the other day that it seems that everytime somebody gets a computer, they disappear off the air for a while. Computer enthusiasts are primarily interested in talking to their computer or using the telephone system to talk to larger computers and databases. The Canadian Digital Class license has borne this out. In the four years that it has been available, it has attracted only about 150 individuals, many of who were already amateurs. (I suggested to K5JB that if there was an amateur that he wanted to get rid of off the air, it would be a simple matter to buy him a computer and some video game software). Some hams are hackers, but not all hackers want to be hams. Computers define a completely different set of interests from radio.

The public service aspect of amateur radio cannot be avoided. Chairman Fowler mentioned Grenada, weather nets and others in his closing remarks. The vote was unanimous (5-0) in adopting the proposed order and it looks like no-code is no way. What is important is that the FCC has reaffirmed two of the basic premises of the amateur service and that is technically proficient operators who are disciplined and willing to provide public service. Elimination of the code would go a long way toward destroying both of these elements. A no-code license would eventually be a "hobby" type license no matter how you cut it. It will only be limited by the imagination of people like Dick Bash in devising memory courses for the theory. That is the current state in Japan where memory courses for the theory are conducted year round. The comprehensive code test is also capable of memorization and it should be beefed up to make it a true skill requirement and not the result of a good memory.

I am not sure how long amateurs can keep dodging bullets on this issue although there has been some reasurances that it is now dead. I am sure that there will be those voices who still complain about entry into amateur radio is barred by the code. It is up to those of us in the service especially with the advent of the volunteer examination system to assist these people in opportunities to get their license so they can not complain of any reason except their own lack of discipline. If they are not willing to work to accomplish the minimal effort to get a Novice license, then maybe the code requirement has performed a beneficial function.

Micheal Salem N5MS

W5YI TELLS ALL

I first heard about the Commission decision on no-code license over the air, but many of the details were filled in by the W5YI Report. Fred ordered a copy of the video tape of the Commission proceedings by Federal Express and use it to make a couple of his comments. He published the results in his January 1, 1984 issue of the newsletter. This was just about two weeks after the issue had been decided. Of course, one could go over to the local law library and dig out a copy of the Report and Order from the Federal Register, but this is a little dry compared to Fred's comments from viewing the proceeding on tape.

Reports like Fred's and Westlink are a lot of fun and in a fashion chronicle all the important happenings in amateur radio and personal computing. He is just starting his sixth year and has circulation figures in four digits. The cost is $18.00 a year (he was warning of an increase to $20.00 later this year) and is published every other week. For those of you who like to be in the know, this is the straight poop. An occasional editorial comment is mixed in also. The address is P. O. Box 10101, Dallas, Texas 75207.

Micheal Salem N5MS

TWO AT A TIME--HYBRID SATELLITES

There are basically two satellite bands in popular usuage today, C Band and Ku Band. Generally, these are never mixed in satellites, but it appears that RCA American Communications has filed a request with the FCC to construct, launch and operate three additional Satcom communications satellites that will carry a total of 40 transponders, 16 Ku Band and 24 C Band.

RCA asked for orbital slots at 61, 63 and 65 degrees to provide coverage to the continental U.S., plus the caribbean basin. The Ku Band transponders will have a 54 Mhz bandwidth with a power of 50 watts which is expected to provide a 46 to 52 dbw signal strength "footprint" on the ground. The C Band transponders would transmit 10 watts of power over 36 Mhz bandwidth, for 36 dBw ground "footprint." Each of the satellites would have two backup Ku-band transponders and three backup c-band transponders. I didn't really find out whether the transponders would be used for video or phone line circuits. No matter how you cut it, if approved by the Commission, that is a lot of satellite space opening up. Just think how many more cartoon and X rated channels that opens up. More than likely, the channels will find a lot of use for video conferencing and other commercial uses. Still adding another 120 channels into the existing market surely will bring down the cost of services. Who knows, maybe the the teleconferencing net will eventually be able to move to one of the satellite channels with both audio and video. Or maybe just the audio on a subcarrier which will make it easier to distribute around the country.

Micheal Salem N5MS

REPEATER ANTENNA AND STUFF FOR SALE

I had a couple of bites for the DB-254 antenna I mentioned last week that we took down after ordering a new DB-224 for the Big Kahuna. This antenna has an internal harness which means that it is rugged as hell. There is no deterioation from the sun on the cable. About the only thing wrong is that there are a couple of elements that need to be tightened up or heliarced back to prevent them from swaying in the breeze and causing a little noise. It is OK for receive, but might cause a little transmitter noise in the receiver when using it duplex and there is a breeze. It is also possible that poor contact area might cause a little intermodulation but there was no evidence of this during the time that it was in service. Being of all aluminium construction, it is lightweight for antenna and can be set in a 9 db offset gain pattern. It cannot be set in an omnidirectional pattern, but that really did not hurt the coverage. If interested, give me a call.

I also have a Measurements Model 80-R signal generator which can be used from about 10 Megs to 450 Mhz. It has variable output and works fairly well. I have used it for sometime, but these things get old. I have a couple of spare oscillator tubes (acorn type) that I will throw in. The output bolometer is busted and may need to be replaced if you want calibrated output. Price is probably about $60.00 or so.

Anybody need a second rig? How about a Swan 350. This has been seen in these pages before, but I still have it. I am not really that interested in selling, but it is surplus and might find a home someplace. Price is about $175.00 with the power supply. Call me at 321-5453 or 360-1302.

Micheal Salem N5MS

OKLAHOMA REPEATER SOCIETY

I had planned to report on the Oklahoma Repeater Society meeting which had been scheduled on January 21 in Woodward. Unfortunately, I was not able to get the airplane signed off for annual in time and had to take a raincheck. Pity, the weather was beautiful, but cold. The Woodward airport was getting a resurfacing on three of its major runways and they were landing people on the Taxiway. No problem, but since I could not get it off the ground in Norman, landing in Woodward really didn't come up. I was going to travel to Page airport and pick up Stan WB5UIY and Joe WA5FLT for the trip. It took them about 2 hours and 20 minutes for the drive. I do understand that attendance was not bad for the weather conditions and a trip way up to the western part of the state. I will let Stan tell you all about it.

In the meantime, we have been checking on airplane reservations for Dayton. It looks like no matter how you cut it, all the airlines will charge you $350 to get to Dayton. This smacks of antitrust in a way. There is a heck of a coincidence here. For example Delta will take you through Atlanta or Dallas and Atlanta on the way to Dayton for the same price. TWA will take you through St. Louis up and back. Yep, same price. And Stan found that Piedmont flies out of Dallas direct to Dayton for $340.00. And how much does it cost to get from OKC to Dallas and then on to Dayton? You got it. Fly American to Dallas and change flights to Piedmont and the cost is $350. Which means that somebody is flying to Dallas for $10.00 or so.

Maybe this is the year to take the small plane again. The cost, worst case should only be about half the cost of the commercial assuming that 3 people fit in the plane. Well, I am still not sure. I went ahead and told Stan to make the commercial reservations anyway. It is sure easy and besides you can get a little something more than a glass of ice tea on the flight.

Micheal Salem N5MS

BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

The New Editor Speaketh

Hi there.. This is your new 76'ers C&E column editor. My call is KB5XN, and the name is Jim Seals. I'm sure a lot of you know me, have talked to me, or maybe just heard me... (I tend to talk a lot.) Hopefully, I will talk a lot about the things you want to know about. I welcome your input, both in written form, as well as your comments about my efforts as editor of this column. I won't go into a lot of detail as to the committe reports, as I will leave that to Jerry to write when he submits the minutes. We had a pretty good turn-out for this meeting. Saw a lot of old friends, and lots more that were missing. Come on folks, we'd like to see you at the meeting.

The repeater committee gave the report on the status of the repeater controller, and things look pretty good there. We're still waiting to get the circuit boards printed so we can get the micro-processor board going, and Jerry gave his report on the design of the voice synthesizer. A motion was made to have Jerry order the parts for construction of the board, the motion passed, and Jerry was directed to order the parts. (I have since talked with Jerry, and he has placed the order)

The program for this meeting was a video tape on the divestiture of the Bell operating companies by American Telephone and Telegraph. There was quite a bit of background information in the tape about what caused the breakup, and a lot of speculation on the part of the news media as to what the future will hold for us, the consumer. I will freely admit that I don't have the answers.

Just to give you an update on the packet radio experiments conducted by Joe, K5JB, and myself, we have successfully linked his two TNC's thru mine, in the "digipeat" or digital repeater mode. I established mine as the repeater, and Joe was able to link his through it. One other thing I would like to try, is to connect a modem and telephone to my TNC, and have someone at a remote site act as the host terminal at my TNC. They would then be able to talk to Joe via packet radio thru the phone line.

FLASH!!! This month's text for the C&E column from the 76'ers has been sent to K5JB from KB5XN via packet radio. Joe has generously offered to pass the text for Jerry, N5AUH, and myself to be pasted up for the C&E layout. Thanks Joe, and thanks for the thrill of seeing the TNC's pass all the data so effortlessly. I have learned quite a lot about this new mode of communication while working with Joe, and I really appreciate his efforts in being available to work with me at odd times.

I will close the column now, and wish to restate, that if you have input for the column, please get it to me or Jerry N5AUH and we will get it in for you.

73 KB5XN

Footnote from the printing department: Jim must have wanted to send this stuff pretty badly via packet radio because after having trouble getting the COCO to communicate with the TNC, he retyped the WHOLE thing into his Model 1...K5JB

MINUTES OF JANUARY MEETING

The meeting was called to order by The Pres. Don Duck AE5N at 7:21 PM.

Introductions followed. There were 16 members and guests present.

Treasurer Report: Sec Tom WA9AFM reports the club now has $375.32 in the Total Checking acct. and breaks down to be $115.54 in the club treas. and $259.78 in the Repeater fund. With cash on hand the total is $409.00. CORA has been paid. A question was asked about the membership cards that have the line about being sponsored by the Air Natl Guard. Since we are no longer sponsored by them we decided to just cut off that line since it is right near the bottom of card.

Secretary Report: The last meeting was the Christmas party so there was nothing to report

CORA Report: There was no Dec. meeting so our representive reported on the Nov. meeting. The meeting was mostly on HH84 and some of the different convention facilities made their presentations. The Lincoln Plaza Motel was selected. The 76ers were again selected to head up the pre-registration.

Repeater Report: The repeater is now running on the new AC power supply and also a new receiver has been installed. It has been sounding real good. The circuit boards are still in the process of being printed and should be available later this month.

Voice synthesiser: Motion was made to go ahead and order the National chip set and the motion was seconded and voted on. The motion passed. The Treas will send the Committee the Funds to go ahead and order. Permission has been obtained to install the tower on the hospital so we will be having a tower party as soon as the weather will allow and Dick figures out how to run coax and etc.

Old Business: The Pres asked for volunteers to serve on the HH84 prereg committee and believe it or not there were 5 volunteers who were AE5N, N5AUH, N5BFD, WD5JNT, WB5TMW

New Business: There is some CORA business that we took care of in new business. A motion has been made in CORA meeting to make the Editor and the Circulation Editor part of the Governing board of CORA so that they may have a vote in CORA affairs and meetings. A motion was made that we direct our CORA reps to recommend that action be affirmed. Motion was seconded and question was called. The motion passed 100%.

Other new business included a motion to change our meeting start time to 7:30 since some of the guys who come from out of town can't get there by 7:00. The Motion passed also by 100%.

A break was called.

After the break our program feature of the night was a very interesting video tape about the breakup of AT&T. KB5XN who is an employee of the new Southwestern Bell Co. Commented on the film. There were several interesting question asked following the tape.

Meeting adjourned:

See you next month at 7:30 Second Tuesday at the OG&E Cafeteria.
Jerry Sproul, N5AUH, Secretary

For Sale: TI 99/4A like new with original box $75.00. N5AUH 354-2061 354-0017

OK DX

De AD1S.

BIG NEWS! LACCADIVES ISLANDS MAKES FIRST APPEARANCE IN NEARLY A DECADE!

VU7WCY has been heard daily since mid-December, and a second group of operators began on January 1 with better equipment and propagation, allowing more frequent QSOs with Stateside stations. Split operation is now used, improving the QSO count dramatically.

At this writing, we know of at least five OKC area stations that have worked the VU7. Hopefully the FLUX will hold and signals will be as strong as heard during the past week.

From the standpoint of propagation, it appears that OK DXers have three chances at the VU7: First listen LONG PATH (about 210 degree beam heading) from 1300 to 1500 UTC and again SHORT PATH (about 15 degree beam heading) from 1800 to 2000 UTC on twenty meters. A final possibility is forty meter LONG PATH at about 0100 UTC.

VU7WCY most recently has been heard on 14.180, 14.186, 14.195 and 14.215 Mhz SSB, usually listening up at 14.250-260 or 14.200-210 Mhz. They also have been heard at 14.024-025 Mhz listening up about 5 Khz CW.

On forty meters, they have been heard at 7.050 Mhz listening up SSB and 7.005 Mhz listening up 5 for CW. Good luck!

BEACONS! The Northern California DX Foundation has established a worldwide beacon system on 14.100 Mhz and is a very effective way to check twenty meter propagation to all parts of the world.

The beacon starts a sequential transmission every ten minutes, with automatic and power-attenuating signals from 4U1UN, W6WX, KH6O, JA2IGY, 4X6TU, OH2B, CT3B and finally ZS6DN. Transmission time from each station is roughly 58 seconds with power attentuated in 10db steps (100 watts, 10 watts, 1 watt, 0.1 watt, etc.)

Obviously if you hear the 0.1 watt signal from 4X6TU, you have excellent propagation to the Middle East, etc. As you can see, the beacon is also an easy way to test receivers, antennas, etc.

The Northern California DX Foundation would like to receive your comments and SWL reports regarding the beacon. For complete details, check page 27 of the June 1983 QST, or write NCDXF, P.O. Box 2368, Stanford, CA 94305. Great group of dedicated DXers!

Speaking of NCDXF, they are prime movers in the upcoming DXpedition to CLIPPERTON ISLAND. Mark your DX calendar for March 5 - 23, 1984, the expected dates for operation by a team of Tahitian and American hams on Clipperton Island. We understand departure will be from Acupulco on March 5, so actual start should be around March 10, 1984. The callsign will be F00OX.

NEXT MEETING! NEXT MEETING!

The next meeting of the OK DX Association will be held on Monday, February 13, 1984 at Fred Gang's Restaurant, 4620 N.W. 39th Expressway, Oklahoma City.

The gathering usually commences around 6:00 PM (0000 UTC)... Everyone with an interest in HF DXing is invited to attend. (Don't be shy.) There is no formal business meeting, no officers, no dues; just a casual meeting of DXers from the OKC area.

** MORE ACTION ON THE BANDS **

THIS IS ALL GGOD STUFF!!

Jim Smith, VK9NS first said he hac permission to operate from KERMADEC, then the permission was withdrawn, then on Christmas Eve permission wa granted again! So as of this printing, we hope Jim will show up ZL0 sometim in mid-February!

KC7UU is still trying for operatio from the NIGER REPUBLIC in February but this expedition has been on-agai and off-again for several months. hope he makes it, but "busines conflicts" may prevent the trip.

Tom Wong, VE7BC will return to CHIN in late March and early April and To DOES have permission to operate SS again. He is taking a team o operators with him and should be hear from BY1PK quite often. Hopefully h will not experience the broadbande jamming (from the U.S.S.R.??) tha he had last year when he made th first SSB QSOs from the "new China".

AVES ISLAND (YV0) is still a stron possibility, hinging on th cooperation of the Venezuelan Nav which is providing transportation.

YI1BGD has been active again on twent meter SSB, and the DX Report sa veteran QSL Manager W3HNK can hel with cards. I am giving it a try...

Does anyone know where LU1DZ/X wa operating from??? He was worked c January 14, 1984...but we have no ide if he was in Argentina or one of th "rare" islands further South.

CONTEST CONTEST CONTEST

The ARRL DX Contest is scheduled fc the weekend of February 18 for CW a March 3 for SSB. These are good on to add to the country count...even you make a full-blown entry. See y on CW!!

Until next month, enjoy the iou propagation and work lots of new one 73 de AD1S.

FOR SALE- ALMOST NEW ZENITH Z-25 Data Syste Printer. Dot Matrix, Parallel inputs, Long Carraige. Runs good, but has slight exposur smoke. Will consider all offers. Call Georg AD1S for information. 722-6195.

For Sale- ICOM 720A HF Transceiver, PS-15 P Supply, Microphone and CW filter. $850.00 C George, AD1S. 722-6195

FOR SALE - THEFT RECOVERED ALMOST NEW

*Motorola Trunked Syntor XX Model #TUF1071A FCC TX data CC5031, FCC RX data RC0246, FM Way Radio, Subfleet Selector 5 positions + *Desk Mike TU,1004B, Motorola Moden 36 Page Model #E08ENCoOO36AL. Will consider all off Call George, AD1S for information. 722-6195

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Q. R. Zedd

ZEDD THRILLS TUESDAY COFFEE GROUP

A dozen of the faithful had gathered at the Commons Restaurant on the University of Oklahoma's campus for adult education a couple of weeks ago when the door whisked open and in walked the world's greatest DXer, Oklahoma's own Q. R. Zedd.

Well, you can imagine how thrilled the boys were. W5SQJ swallowed his Red Man and W5MCJ hurt his leg rushing over to shake hands. W5LFK quickly zippered his jacket to hide his Penn State tee shirt, knowing the legendary man's preference for Big Eight teams in general and his beloved Sooners and Cowboys in particular, and WA5RPP, reporter for the SCARS group, quickly whipped out his pencil and Big Chief tablet.

W5MCN rushed off for a fresh cup of coffee and a dozen doughnuts, one of which he planned to hand over to Zedd.

"Howdy, boys," the holder of the world's only one-by-one callsign, A5A, said, straddling a chair at the far end of the table and quickly signing 73 SK to a contact in Rangoon which he had been working with the TR7 strapped to his chest with velcro tape and the straight key he always has taped to his right thigh. "How's it going? How's DX?"

"Well, I worked a couple of SVs and an XU and BV2A and a flock of ZLs and VKs this morning on 10 meters," quoth W5MCN, breathless from running back with the coffee and bolting eleven doughnuts with chocolate icing and little red and green speckledy things on them.

"That's interesting," quoth Zedd. "You use the long path for the SVs?"

"Could hear 'em both directions," W5MCN replied. "The band was real good."

"I remember a band opening on 75 one night back in fifty-ought-seven," said Zedd. "Durndest thing I ever did see." Then, as is his wont, being so modest and all, he lapsed into silence, slurped up his coffee, and fired up a Roi Tan, sending out clouds of CW smoke signals (and, incidentally, confirming a contact with WA5MLT in Richardson, Texas).

The boys all waited. Even W5UZD stopped talking. But Zedd said nothing more.

"You want to tell us about it, Q. R.?" finally asked W5OU.

"It was about two o'clock in the ayem," said Zedd, turning his chair around and leaning back against the lady running the Tuesday morning vacuum cleaner, "and I was working a few QRP contacts into Albania and Rumania and Turkey and commonplace QTHs like that, when all at once there was a kind of sizzling sound on the receiver and I began to hear a lot of faint signals down underneath the religious fanatics and fellers talking about the good old days.

"With my uncanny sense of the dramatic, I cut in one of my smaller linears and accidentally overdrove it a minute, to kind of clear me out a little swath, and when I let up on the key, sure enough the fanatics were off about a hundred Kc and the other guys couldn't be heard anywhere atall.

"And there in the nice quiet I'd made, I heard a ragchew net amongst a bunch of Eskimos at the South Pole. So naturally I gave 'em a shout and they were all thrilled to work me.

"Eskimo radioing is kind of interesting. In the first place, they haven't got any electricity. What they have to do is make capacitors out of old blubber cans and charge them up by rubbing sea lion tusks against seal skins. Then they run the output through a whole series of voltage dividers, shooting most of the charge right back into the big cap, bleeding off just enough to run a homebrew one-watt rig made out of old ice trays, rusty nails, and bits of electronic junk they scrounge periodically from the innards of stray sharks and whales.

"You can't use a regular antenna down there. It gets too cold. How cold does it get? It gets so cold, if you radiate normal rf, it plumb freezes in midair about three meters off the broadside of the wire, and sometimes there's a spring melt six months later and all that energy gets soft and falls to the earth, killing I don't know how many novices and sled dogs every year. So what you have to do, if you're an Eskimo, is you have to use Sterno and such like for your antenna. Which really complicates hooking up your PL259s and all. The favorite method is a blubber bonfire, where you inject your signal into the blubber with a resonant blowtorch and then you add or siphon off blubber depending on band conditions and all.

"But I digress.

"That same night, the band was so good, I worked a Russian modulating a vodka bottle, a kid with a broken Mickey Mouse watch feeding a rusty fence in South Africa, two hams in Japan that as near I could tell were using home-brew flashlight modifications, and a German's back-teeth fillings in Munich. What made this all the more incredible was that when I got up the next morning to give the guys on the West Coast nets a thrill, I found that a goat had chewed through my coax and I had done it with no antenna at all."

There was a profound silence around the Commons coffee table, and somebody went to the bathroom. But Zedd, it seemed, was only warming to his topic.

"I am reminded," he told us, "of one or two other famous exploits."

(To be continued.)

--KU5B

Great Plains A.R.C.

The Great Plains ARC met at the Courthouse in Woodward with our new president, Windle Hatchett presiding.

The minutes were read and approved. The Treas. report of $330.92 balance was made and accepted.

N5CCV introduced two young men from Vici that had passed their novice exams, but as yet haven't rec'd their calls. They are: Mark and Michael Bowman.

Gerald gave the net report: 167 check ins, 19 pieces of traffic handled. A discussion followed as it was related that several Mooreland hams went to the Mooreland Golden Age Center and took Christmas messages from the residents there. These hams made several trips to the center for messages and passed them over the air. Three to four hundred messages were passed and many had a return message. There was great delight on both ends of the traffic.

Discussion followed about the space shuttle. Several had heard the astronot.

The "73" repeater was discussed. It was reported that it would be working soon.

Our search at Mutual for Tim was mentioned.

It was announced that a novice class will be held Thurs. evenings at 7 P.M. Also class will be held at the same place and time for those who wish to upgrade. These classes will be at the Woodward courthouse.

Our upcoming Repeater Society Meeting, Jan. 21 at the Woodward Courthouse was discussed. It begins at 1 P.M. Coffee and donuts will be served. All are welcome.

Much discussion followed about having associate members of our club. It was noted that this would involve modifying our by-laws. Plans were made to discuss this and vote on this issue at our next meeting in Feb. That will be Feb. 7th.

73, K5YZK

TRS 80C Central Oklahoma Computer Organization

CLUB OFFICERS

Chairman Tom Stott 324-5086
Vice Chmn. Hollis Holcomb 799-2539
Sec/Trs Miles Langmacher352-4059
Meeting held at Red Cross Bldg, 10th & Hudson, First Sat, 9:oo am. Dues* 5.00 year.

Meeting called to order at 9:10 am, Saturday, January 7, 1984 by Tom Stott. 86 were present.

Tom Stott opened with a short speech concerning talks, lectures, reviews, etc. Menbers wishing to talk on these subjects are greatly encouraged and should call Holly, Tom, or me.

Ron Hilburn got up and talked about a new disk controller contact sealer he dubbed "PURE MAGIC". You first clean the contacts with a solvent called "DR. SKAT" (I use Radio Shack's tape head cleaner catalog # 44-1171). Get wooden (not a plastic one, because it will melt the plastic!) Q-Tip and gently work over the contacts. Then you get the Ni-Gel (PURE MAGIC) and smear it on the contacts.

Interestingly enough, Ni-Gel will conduct electricity if it is layered thin enough. A word of caution about putting Dr. Scat on your contacts: DO NOT slop it around while cleaning it. This could result in some ugly splotches on the black plastic case. THIS STUFF REALLY MELTS PLASTIC!!!

PROBLEMS

CONCERNING THE HJL-57:

It appeared that someone had a problem with the HJL-57 Keyboard key driver. A "?FC ERROR" kept popping up in line 110. Anybody that has experienced or solved this problem?

CONCERNING THE COCO II CONTROLLER AND TTD:

It looks like someone with a COCO II and the new disk controller had been faced with a "?FN ERROR" in "TPTODSK" (TTD). Could it be a change in B. A. S. I. Cs? CONCERNING THE TAPE RECEORDER:

Someone had a 2-year old recorder that would load but not save. Tom Stott hunorously joked that he had the same problem and fixed it by buying a disk drive. Suggestions included demagnetizing the head on the tape recorder. CONCERNING "CCN" SUBSCRIPTIONS:

CCN won't have a November or a December issue. Don't panic though, these 2 missing issues will be added onto your subscription. CONGRATULATIONS TO JEFF LOELINGER AND JACK COCHRAN:

These two outstanding people both got something published in either "THE RAINBOW" or "CHROMASETTE". Maybe we will see more members becoming celebrities?!?

The AUSTRALIAN club has given us some programs in the user domain. Perhaps someone would like to write to them. Their address is listed below:

ROBBIE DALZELL
31 Nedland Cres.
Pt. NOARLUNGA STH.
5th AUSTRALIA 5167

A representative from "THE PROGRAM STORE" in Crossroads was at the meeting. They carry a whole section for the COCO (they plan to be expanding too!). My father and I went there after the meeting and were we impressed! (so impressed that I bought a JOY-SENSOR for $34.95. I might bring it to the next meeting.)

For the last part of the meeting, Al Ward gave a lecture about using OS-9. AU REVOIR!

Secry/Treas
Miles Langmacher

S.E.C.S.
(Screen Edit Control System)

IT'S TIME YOU DISCOVERED S.E.C.S.

There is the hidden power lurking within your TRS-80 Color Computer. All you need is the software to harness it. A whole new world will unfold before yours, and all you need is a little S.E.C.S.! Once S.E.C.S. is loaded into your computer, you will be able to work on programs with new effectiveness.

The Edit is screen based. It includes auto key repeat, insert, delete, joining and relocating lines, and audible error warning.

The HI RES. graphic enhancement is a lot more than just another simple graphic package. With S.E.C.S. you can draw lines in any direction, and in any color. You can switch between Hi and Low RES. and invert the screen, set the color and more.

The character generator has a set of 64 definable cherater s. Once you have established your characters they can be placed on the screen in a variety of colors and positions. You can create everything from classical Japanese to advanced scientific notation.

S.E.C.S. is cassette based and 4K is required for the eitor, 16K for other features.

The programs names are, Editor - SECS, Hi RES graphics - G$-SECS, programmable charcater set - PCG-EDIT.

S.E.C.S. MEMORY MAP:

$0000 - 03FF	system data
$0400 - 05FF	low res screen
$0600 - 0B1F	SECS program
$0B20 - 0DB0	programable character set
$0B1B - 27FF/33FF	BASIC PROGRAM
$2800/3400- 3FFF	Hi res screen

USING THE EDIT:

After the edit has bee loaded and EXEC'ed, a backslash (/), followed be a flashing cursor will appear. Next enter the material you wish to edit or begin writing.

ARROW keys	= move cursor
Shift and left arrow	= deletes character
Shift and right arrow	= insert character
BREAK	= new line
ENTER	= end of line

HI-RES. GRAPHICS:

The HI RES GRAPHICS mode permits you to generate dots, lines, and even characters on a hi RES screen.

There are four color available to you in the SECS graphics system as follows: KEY

0 = green 1= yellow
2 = blue 3= red

The Hi RES screen has two different sizes as follows:

CLS SET = 3 for 3K mode which is 128 by 96
CLS SET = 6 for 6K mode which is 128 by 192

The CLS command can also be used to alternate between a HI and LOW RES display. CLS L or CLS H.

To erase a screen use CLS L or CLS H and a color to clear too. AS CLS H,3 for a red screen. When you are ready to set the graphics on screen use the SET ststement as follows: Use an asterisk, to indicate that you want to SET. Then type in the coordinates followed be the color as Example:

SET(* 5,10,2)

This would plot a cell at x- axis 5, y- axis 10, in color #2- blue.

CONTINUED ——→

The HI RES feature include a special "string", ($), command which willbe discussed in the following section on the character generator.

THE CHARACTER GENERATOR

After you load and RUN the characyor generator the following menu will appear:

```
3 3K HI-RES MODE
6 6K HI-RES MODE
C TYPE 'C' HI-RES MODE
E END PROGRAM
G GREEN BASE SCREEN
H THIS HELP DISPLAY
L LOAD TAPE
R TYPE R HI-RES MODE
S SAVE TO TAPE
W WHITE BASE SCREEN
  (ENTER EXIT TO EDIT)
```

The 3K and 6K features change the size of the screen display as decrided in the HI-RES section.

The TYPE C and TYPE R HI-RES mode will change the manner in which the colors are arranged on the screen.

The type G and W command will change the screen background between white and green.

The H command will show you the aboue MENU.

All the above commands will execute when the character generator is 'up' and not when the mwnu is displayed.

After you press ENTER, a complete character set will be displayed on the screen. Using the right and left arrow keys, move the cursor over the letter you wish to modify, then press ENTER. The character you selected will appear at the top of the screen in a large grid. Use the arrow keys to move around in the grid and the space bar to change the square the cursor is over.

When you have completed the character, press ENTER to add the new character to the character set. Save the new character set to tape with the following command: CLS CSAVE"filename". To load a previously saved character set, use the command: CLOADM"filename".

To set a character on the screen use:

```
SET($5,10,2,63)
```

The $ indicates that you wish to place a character at location 5,10 in color #2(blue). The last number (63), is the character to be displayed.

Here is a sample program you can try..

```
PROGRAM NAME 'MIX'
10 CLS SET = 6
20 CLS H,0
30 FOR X=0TO127
40 C = C+1
50 IF C THEN 3 THEN C=1
60 SET(*X,0,C,127-X,191)
70 NEXT X
80 FOR X=1 TO 190
90 C= C+1
100 IF C  THEN 3 THEN C=1
110 SET(*127,X,C,0,191- X)
120 NEXT X
130 IF INKEY$  CHR$(13) THEN 30
140 CLS L
```

MEMORY TEST

Some, if not most copys of 'CBUG' around have been modified to have an extra command. This is a memory test and its called up with an 'E' from the keyboard.

The memory test will first want the starting and ending address you wish to check. This test stores a number in every menory location and then checks to see if all locations has the number it just stored. It then puts a '+' on the screen, for one completed cycle. Then it stores a different number and checks again and so-on. So if you let it complete 256 cycles you would have stored every possible number (up to Hex FF) in every location you wanted checked.

If an error is found, an error message such as the following might be displayed.

```
++++++++++ 06 20 16A0
```

An error message such as this says that CBUG has cycled thru memory 11 times without an error, but on the 12th try a pattern was used that detected an error. The 06 tells what pattern number CBUG was working on when the error was detected. The 20 tells the bit that is in error. $20 (base 16) converted to binary is 0010 0000 -- the location of the one is the bit that is in error, in this case bit 5. Bit numbers start at zero as shown:

```
   $20 = 0010 0000
bit # = 7654 3210
```

The 16A0 is the address where the error was detected. This error at address 16A0 can be the result of:

1. Incorrect data being returned from this address
2. Data stored at another address, such as 16B0, caused address 16A0 to change.

Bob Graham

I should take a minute for those new to the computer and explain alittle about memory.

You will hear alot about bits, in fact you just did, did'nt you. But WHAT IS IT?

Memory runs from 0 to 65535 (decimal, base 10) or 0 to FFFF (Hex, base 16). You may sometime see a '$' in front of a number, this tells you it's a Hex number. You might as well get use to hex and binary (base 2) because it's the easist way to understand or use memory.

First lets count to ten in each base.

Base 2 (binary)

0 1 10

Base 10 (decimal)

0 1 2 3 4 5 6 7 8 9 10

Base 16 (HEX)

0 1 2 3 4 5 6 7 8 9 A B C D E F 10

Now lets look at a number.

base cubed	base squared	base	units
1	0	1	0

If this number was in base 2 (binary), the number would 10 --- because we have no units, one two, no four's and one eight.

If this number is in base 10 (decimal), the number would be 1,010 --- because we have no units, one 10, no 100's and one thousand.

If this same number was in base 16 (HEX), the number would be 4112 ---- we have no units, one 16, no 256's and one 4096.

I hope your still with me, because we're about to make a big jump into the computer. Almost any monitor program, like Cbug will display memory in HEX. Use the 'M' command in Cbug, Dump or list out of Sigmon. This is true even through the computer can only store a binary (base two) number in memory! This is done to make it easy for you, that's right EASY... Lets look at a memory location with

the Hex number 1A store in it. What is really store in that location is the binary equivalent of $1A or 0001 1010. Note how I typed that using eight numbers. Four, then a space and four more. Try it like this:

Hex	1	A
binary	0001	1010

Did a small light, light up in your head! GOOD. Now, just what good is it to know how the computer stores numbers?

Have you ever wondered why you could poke a number in a location, said address $FF21 and do something? Ever wonder how people know what and where to poke to get the color computer or any computer to do things? First you need a memory map or service manual to know where. The R.S. catalog number for the older model computers' is 26-3001/3002. I do not know what the number is for COCO II. Lets take a look at what the service manual said about address $FF21:

```
      - bit 0 - control of the carrier
                detect(RS-232 port)
      - bit 1 - RS-232 status input
      - bit 2 - changes FF20 to the data
                direction register
FF21  - bit 3 - Cassette motor control
                0 = off  1 = on
      - bit 4 - always 1
      - bit 5 - always 1
      - bit 6 - not used
      - bit 7 - carrier detect interrupt
                flag
```

Now you can see that each bit of the binary number store at a memory location can be used by the computer. If 1A is stored at address FF21 then the Cassette motor would be ON. This is because a one would be in Bit 3.

I hope this helps you a little -- BIT...
Holly

::: FAMILY :::

By Glenn B. Knight TWM P.O BOX 232
Lititz, Pa. 17543

A genealogical data base program for the color computer.

** NOTE **

Disk users must run the program 40K and have extended basic, to have enough memory. Cassette users must have 32K and extended basic, POKE25,6:new:clear0 before loading. This will free enough memory for eight generations.

The main menu will offer these options:

1) CREATE NEW FILES
2) CHANGE CURRENT FILE
3) SAVE FILE TP TAPE
4) LOAD FILE FROM TAPE
5) PRINT OPTIONS

1) CREATE NEW FILES. On selecting this option you will be asked for a reference number. That is the number which identifies a person's position on your family tree. Your reference number is ONE. Your father's number is two, your grandfather's number is four, his father's eight, etc. Any person's father is alway twice that person's number and his mother is twice plus one. For example, your mother is 3 (twice 1 plus 1). Her father is 6 and her mother is 7. This is standard genealogical notation which you will be quick to pick up.

After you determine the reference number you will be asked for a name. Type the name anyway you wish but keep them all the same. Try to keep names to 22 spaces or less, otherwise you may have trouble eith your PEDIGREE CHART. You will be warned if you exceed 22 spaces. Make correction when you reach the MODIFY option.

Next is the DOB (Date of birth). Again use any form but keep all entries the same.

POB (Place of birth) is next. WE suggest the 2-letter post office code for states.

Even numbers (male intries) and 1, will call for DOM and POM (date and place of marriage) and number of children. The marriage and number of children are filed only for the husband of each family to save memory space.

DOD,POD and BURIED AT data is listed for all the names along with OCCUPATION.

After entering all this data you are prompted to CONTINUE, MODIFY, RETURN. CONTINUE allows you to enter data on another ancestor. MODIFY sent you to the CHANGE CURRENT FILE sub-routine and RETURN displays the Main Menu.

2) CHANGE CURRENT FILE. This allows for corrections to previously created files. You can call up the current data by reference number, the data is displayed and you are asked which item to change. The new data replaces the old data in your file.

At the conclusion of the operation the prompts CONTINUE and RETURN appear. CONTINUE allows other changes and RETURN calls the Main Menu.

3) SAVE FILE TO TAPE. When you have enterd all available data you will want to save it for future use. Be sure to make at least two copies -- you do not want to have to do it all over again because of a piece of faulty tape. The screen pronpts tell you what to dt and displays the REFERENCE NUMBER being saved. ALL 255 will be saved, even if they are empty or no changes were made.

4) LOAD FILE FROM TAPE. Stored data can be put back in memory with this sub-routine. Follow the on screen pronpts. The REFERENCE NUMBER being loaded will appear on screen.

5) PRINT OPTIONS. Follow the on screen prompts EXACTLY as this sub-routine will delete the "FAMILY" program and instruct you to load "FAMPRINT" program, which is the next program on the tape. If you have previously saved data and have no additions are changes to make you can enter the PRINT OPTION directly with:

POKE25,6:NEW:CLEARO ENTER CLOAD"FAMPRINT" ENTER RUN ENTER

PRINT OPTION MENU:

1) PEDIGREE CHART
2) FAMILY GROUP CHART
3) REFERENCE NUMBER INDEX

1) PEDIGREE CHART. This chart provides a graphic display of any 5 generation in your file. Start printing at the top of a page.

2) FAMILY GROUP CHART. This option will print all available data on a family group (husband and wife). Data on your spouse -1- is not available due to memory limitations.

3) REFERENCE NUMBER INDEX. This is a utily index to provide you with the names you have on file and their corresponding REFERENCE NUMBER. Start printing at the top of a page.

*** TAXI ***

Taxi is a cassette oase program, at least for now. It has a basic loader program and then serveral ML programs. One of these ML program is the instruction's.

The Object of the game:

In Taxi, kids get "behind the wheel" of a cab. by maneuvering around street grids based on city maps, players try to deliver as many passengers as possible before time is up. When played cooperatively the game encourages communication and division of labor. As players develop mutually effective strategies, their scores will increase. Taxi is for the younger generation, 7 to 10 years of age.

Joysticks, cassette and extended color basic are all required.

A NEW COCO '

What's wrong? Don't you like the looks of your old COCO? Envy those TDP-100 Owners? Wish you could do something about it? Wish no longer! The solution is here!!!

First, if you would like to have the top part of the TDP-100 case, stay tuned. If not skip down a few paragraphs. Now, follow these step to get the top part of a TDP-100 case:

1) Call the Tandy national parts warehouse in fort worth. The phone number is 1-(817)-870-5662.

2) Ask if they have any of the top part of the TDP-100 cases left (part number AZ6858). If so, secure one for yourself (if you want one). These cost $12.25, shipping included, and $11.71 without shipping.

3) Wait about 1 to 2 weeks for it to come in the mail. As soon as you get it, unscrew the cover off your computer. Put the TDP-100 case cover on and Volla!

Wow! That looks great! Oh-oh.. there is that depression in the middle of the case where the TDP-100 logo is supposed to be. Now, what can we do about that? here is the answer!

Go to your local Radio Shack store and ask if they have the "Tandy Corporation Annual Report 1983" brochure. The front of it looks like a model 100 protable computer. Cut out the Radio Shack TRS-80 Model 100 Portable Computer logo in the upper right hand corner. Take a silver write protect sticker from a box of diskettes and apply it to the place where it says MODEL 100 PORTABLE COMPUTER. Then go to a drafting store or a Ratcliff's store and get some rub-off letters. Carefully (and I mean it) apply the letters to form the words 64K (or 32K, whichever one that your computer has) COCO. Stick the whole thing in the depressed area in the case. ALL RIGHT!!

Still thing there is something wrong with it? (you can always find a fault if you look long enough) Perhaps white doesn't look good with gray? Well, don't just stand there, let's change it!

Get some saran-wrap, some flat black spray paint (or you could get purple for that matter) and some masking tape. Take the cover off and wrap it in saran wrap. Screw it back on. Turn the computer over, and tape off the vents and such. making sure that the is covering the vents, paint the gray area flat black. let it dry for about 2 hours.

Now, that it's dry, take off the cover and throw away the saran wrap. Do the same with the masking tape. The work is all done, so you can just set back and think of something else that looks wrong.

Sec/treasurer
Miles C. Langmacher

CIMARRON A.R.A.

Things have really been hopping around the CARA camp lately. Old St. Nick was very generous to several, N5FUO came out on top of the heap with a new Cushcraft A4 tribander.

At the December 12 meeting club jackets were ordered. This ended a year of discussion and debate on the subject. They should be ready some time this month.

Three CARA members upgraded in December, they were: N5FUO to General, N5FUR to Advance and KD5YB to the exaulted class of amateur Extra. Congratulations one and all on a job well done.

The mebership voted at the January 9 meeting to have another novice class. Some details remain to be worked out but the start date has been established as February 14. Everybody is encouraged to join in the fun. A little participation is always welcomed.

This months net control is AB5Z. The net meets weekly on Thursday nights at 0200Z on the 145.45 repeater. Come check in with us.

FOR SALE: Henry 130A01 2 meter amplifier. Can be driven by as little as one watt. A steal at $150. 25 amp heavy duty 13.5 volt power supply with adjustable voltage, current limiting and crowbar, just right for the Henry amp. $100. Major Bailey, KI5P, PO Box 325, Fairview OK 73737 or call 227-2061 after 5:00.

FOR SALE: ATLAS 350XL with manual and mobile mount, excellent, $300. Also assorted lengths of coax. Walt Harris, WD9BIT, Box 1cccc, Lahoma OK 73754.

M-O-R-I-

IF ALL GOES ACCORDING TO SCHEDULE. BY THE TIME YOU READ THIS M.O.R.I. WILL HAVE BEEN OPERATING THE NEW CONTROLLER ON THE 146.67 MACHINE. THIS CONTROLLER PROVIDES THE CLUB REPEATER WITH ADDED CONTROLS AND FUNCTIONS AND WILL BETTER SERVE THE CLUB'S NEEDS.

THE MEETING SCHEDULED FOR TUESDAY, FEBRUARY 7, 1984, WILL NOT BE HELD AT THE OKLAHOMA CITY E.O.C. CLUB MEMBERS WILL MEET AT THE GENERAL MOTORS ASSEMBLY PLANT WHERE A TOUR OF THAT FACILITY WILL BE THE PROGRAM FOR THE EVENING. SPOUSES ARE MORE THAN WELCOME TO ATTEND. HOST AND TOUR GUIDE WILL BE RON NDSS. A MEETING ROOM WILL ALSO BE PROVIDED TO CONDUCT NORMAL CLUB BUSINESS. THE TOUR WILL BE AT 8:00 P.M.: MEMBERS MAY ENTER THE BUILDING ANYTIME AFTER 7:00. "TALK IN" WILL BE ON THE 146.67 MACHINE.

THE TOUR WILL TAKE APPROXIMATELY 90 MINUTES AND MEMBERS ARE REMINDED TO WEAR COMFORTABLE SHOES AS THE TOUR IS EQUIVALENT TO A TWO MILE WALK. SAFETY GLASSES WILL BE PROVIDED, IF YOU WEAR PRESCRIPTION GLASSES THOSE WILL DO FINE. CAMERAS ARE NOT PERMITTED IN THE PLANT.

THE GENERAL MOTORS PLANT IS BORDERED ON THE NORTH AND EAST BY TINKER AIR FORCE BASE. TO GET THERE TAKE:

I240 TO SOONER RD. NORTHBOUND
RIGHT ON S.E. 74TH ST.
PROCEED EAST PAST AIR DEPOT
(FIRE STATION WILL BE ON YOUR RIGHT.)
ENTER GATE 4 AND TAKE YOUR FIRST RIGHT.

ENTER THE PARKING LOT IN FRONT OF THE MAIN LOBBY (BY THE U.S. FLAG). PROCEED TO THE LOBBY; MEETING ROOM IS TO THE RIGHT.

HOPE TO SEE YOU THERE.

RON ND5S

ALTUS AREA AMATEUR RADIO ASSOCIATION

The Altus Area Amateur Radio Association met at the North Main Fire Station basement 1930 hrs. on January 12, 1984.

Eight members and one visitor attended the meeting. They were Gary, NE5BS; Dwight, WB5KRH; Shorty, K7BSY; Loren, WA5CBF; Bob, N5AIP; Steve, N5EOZ; Dennis, KA5KVU; Phil, K9PNT; and Bill Sutton, N4HXO.

Bill, N4HXO, is a newcomer to the area. He currently residing at Eldorado, a small town in S.W.'ern Oklahoma. He is the pastor of the Eldorado Church of the Nazarene.

News o nes of two members. Betty, WB5PMG, and Deanna WB5UMH, both have been experiencing back problems. We wish both a speedy recovery. Betty may take a while as she is currently enjoying the conforts and food of the Jackson County Memorial Hospital.

Gary, NE5BS, has set a new record among our group of seafood lovers. Was that really 17 jumbo butterfly shrimp consumed? Gary was also caught by his wife trying to sneak in a Commodore MPS 801 printer after work one night.

Dwight, WB5KRH, the Altus Civil Defense Director, spoke on the upcoming Weather Watch season fast approaching. He has a tentative Weather Watch organizational meeting planned for sometime in February. More details on meeting date and location in next issue of CORA C&E.

The question of properly elected club officials was raised by Dwight. After much discussion, Loren, WA5CBF, was elected club secretary for 1984 and Gary, NE5BS, was railroaded into being club president.

Loren, WA5CBF, read the prepared financial statement to the assembled group. We have currently $366.59 in the club treasurery.

The next club meeting is February 9, 1984 at 1930 hrs. at the E.O.C. North Main Fire Station. C U there.

Iwould like to introduce myself as the old secretary (1982) of the Altus Area Amateur Radio Association. I am filling in until a regularly elected secretary takes his or her place. The Altus Club has been suffering for the past few months through lack of participation and the Christmas holiday's rush. I guess all clubs go through a low point this time of the year.

One of the big problems of the Altus club, besides the long distance problem, is the diversified interests of it's members. Some are strictly traffic handleing, emergency work, two meter F.M., or H.F. c.w.. You got to face it-we are all Hams but we have many different interests. It is hard to plan ahead and make it interesting for everyone.

Remember it's your club, whether it lives or dies depends on you. I do not wish this club to be known as #4 in the long sequence of amateur radio clubs in this area throughout the years.

We got a lot of good things going for the club: March, April, May-Weather Watch Participation; June-Hamfest; August-Ice Cream social; Transmitter hunts; September-Hamfeast.

There were 16 people who responded with their dues for 1984. This indicates, in a round about way, they were still interested in the club and wanted it to survive.

The following is a list of active club members and their renewal dates:

WB@WCB	8604	W5VQS	8503	N5AIP	8412
KE5BS	8401	WB5KRH	8409		
WB5PMG	8412	WA5TXG	8504		
K9PNT	8409	WA2JXD	8404		
K5KCJ	8408	WB5UMH	8403		
KB5LS	8409	KA5KVU	8412		
WA5CBF	8501	WB5MJS	8408		
WB5KPM	8412	N5DKZ	8412		
WB5CFS	8404	NE5A	8402		
N5EUA	8502	WD5BBV	8502		
N5FQR	8404	W5CCV	8411		
N5EOZ	8410	W5ZDI	8501		
WB5UEB	8402	WA5OGC	8401		
K7BSY	8404	W5UOV	8404		

One of the big problems of the club is the lack of participation of the membership. ATTEND THE MEETINGS-IF YOU DON'T HAVE ANYTHING TO SAY, FINE, BUT WE DO NEED WARM BODIES THERE.

Another pressing problem is the question of formally elected club officers for 1984. Any volunteers? Would anyone like to be President? If anyone wants the job of secretary and is willing to work at it-come see me. If anyone does not, then I'll volunteer to carry the ball for ONE YEAR ONLY as secretary.

I have noticed more and more of the Hams, both members and non-members, purchasing home computers. The ones that I know about are: WB5KRH, C-64; WA5CBF, C-64; KE5BS, C-64; NE5A, C-64; W5VRA & WB5UEB, TRS-80; N5EOZ, Apple; WA5ZAR, VIC-20; AB5Q, Apple; and WA5OPV, Apple. Seems like we should form a computer club rather than a Ham club. There is currently a lot of interest in it.

Speaking about computers, one of the neatest little programs that I have come across is entitled "IFR" (Flight Simulator) by Tom Wanttaja by Academy Software, P.O. Box 6277, San Rafael, CA 94903. I quote from the instruction booklet; "This program simulates a flight in a light aircraft under IFR. All instruments used for basic IFR flight are present: artificial horizon, airspeed indicator, altimeter, compass, vertical speed indicator, turn and bank indicator, tachometer, fuel gage, glide slope, localizer, flap and gear indicators, DME, and ADF. Inaddition, this aircraft is equiped with a LORAN-C based inertial navigation system. The aircraft has the performance approximately equal to the Cessna 172 RG." It is just like flying a plane on IFR conditions- I'm told. I am not a pilot, but I have fun trying. I am going to have WA2JXD, a C-5a Instructor Pilot, rate it. Plus WA5WIC to rate it also. I'll give a follow up on this particular computer program.

Club meeting is scheduled for 1-12-84 at 1930 hrs. at the E.O.C. North Main Fire Station.

THE BIG SIGNAL NEWS
OKLAHOMA CITY AUTOPATCH ASSOCIATION, INC.

Well i guess since December is past I'll touch on the dinner meeting briefly. On December 20, 1983, the OKlahoma City Autopatch Association held their annual Christmas dinner with 12-13 couples plus harmonics in attendance. A bodacious amount of food and fellowship was enjoyed by those in attendance. Last heard, Reggie WN5NWX and Kathy WB5NDO were still blowing bubbles from their QTH and wouldn"t let Dale, their son, participate. Frank, N5FM only had one dozen of his FABULOUS tube collection left for sale, while, Larry, W5NZS had finnally broken the logic on his new "talkies" and was happily working 1296 MHz "Moonbounce" with them.

Well, 1984 is here and "Big Brother" still hasn't had any impact on the Autopatch group. But as one of our more prestigous illuminaries has presented to us on the air, "Orwell isn't any better than anyone else, pay upor be considered just spurious intermod.

The January 17, 1984 meeting went off without a hitch, a lot of snow and slick st-eets but no hitches. Thirty one stouthearted souls braved the elements and drooled over shots of Hawaii and Christmas Island and a couple of shots of George's legs. A spectacular presentation to say the least George and by the way, there was some talk in the southern regions of the state that a pirated copy from ATV was being showo at a local bistro. Hi! Hi! Jarvis will never be the same!

1984 WX Meeting
February 21, 1984
KWTV Channel 9
7:00 p.m.

Through efforts by many, the 1984 WX meeting will again be held at the studios of KWTV. Several meterologists from the area will be on hand for the presentation. A little different angle is sure to surface this year to help us in our spotting efforts of tornadoes and severe storms. The stage is set for one-heck-of-a program. Don't you dare miss it!

Once again our responsibilities to the publis are vividly upon us. That public service event called Weather Watching. From February to september a great service is rendered by the Amatuer radio community. If we all would get off our laurels and just do what we all know we can do, I feel a tremendously effective WX net can be operated.

In the area of controllers, ours has not been ordered yet.....I'm sure a few wonder why? to those of you who have donated, Thank You Very Much; for those who havN't, its your eqiipment also and we would like your help also. Please contribute to your club

HAM HAPPENINGS REFER TO CLUB SECTION FOR SPECIFICS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
February 84			ARDMORE 1	EDMOND Club 2	Aeronautical Center ARC 3	COCO 4
5	6	MORI Great Plains 7	76'ers SHAWNEE 8	ALTUS AREA 9	10	11
Wheatstraw 12	OK-DX 13	SCARS @ 76ers 14	15	KAY County 16	17	18
19	A.R.E.S. 20	AUTOPATCH 21	22	23	24	VHF Club EARS 25
26	CIMARRON EDIT COLLECTOR - EMITTER 27	CORA SHAWNEE 28	LEAP DAY 29			