

## MORI

Now that Field day and Ham holiday '93 are behind us, where do we go from here? We have watched our club grow an active and viable weather net, fox hunts and field day activities. What more can be done? We have moved from a single 2 meter repeater to currently three 2 meter repeaters and a 440 repeater. This is a lot to have happened in less than a year.

Much of what has occurred because of the almost tireless efforts of our technical committee and the elected leaders of our club, as well as the efforts of volunteers to the other mentioned activities. The participation of the membership has been outstanding, but I feel that there is more that can be done. There should be some other activities for the club to do, a special event station, a fall picnic, an information net (or some other type of net). It only takes you.

When cooperation happens amongst people, miracles can occur. Now that we are moving along and have a full head of steam, lets not burn out the workers. Support for each other is necessary for any enterprise to succeed. If you have an idea for something that you would like to see happen within the club, then get involved. One evening a month isn't too much to give to bring joy to hundreds of fellow club members.. I have watched the beginning of greatness, and the emergence from the cocoon brings forth beauty.

If one club could do all things then there would be no reason for the existence of so

many different clubs. Support of CORA and a willingness to cooperate with each other is essential to a first class Ham Holiday. I have heard many complaints about what should have been done and what could have been done and even who should do it. As the old saying goes, "If you don't like the leadership, GET UP AND LEAD!!" Don't be part of the problem, be the solution. Help out amateur radio in OKC by supporting CORA. Volunteer to change things for Ham Holiday and CORA's member clubs.

We are approaching a point of crisis, like at the time of birth something new is coming and CORA will either live to be better because of your efforts or it will die because, we complained until the efforts of those who volunteer their time and financial resource come to the inevitable conclusion that this crap just isn't worth it. Stop complaining and find a way to help succeed.

Rick Masters, N5WNR

HOWDY!!!! This is N5QKI (as usual)Now the Important Stuff...

By the time you read this, the 146.925 repeater should be transmitting from its new perch at 1200 feet... The 145.21 repeater is just about ready to go on the air...

Hopefully most of you have had the chance to try the 444.1 repeater which is doing EXTREMELY well.. On a daily basis, handheld coverage extends to near Stroud on the turnpike! Many people have checked in from across the state and we will be looking forward to hearing you on....

Just a reminder, the 444.1 repeater requires a subaudible tone of 141.3 Hz. The phone patch on 146.925 has been disabled since we can only have two repeaters on the same phone line.

Also a reminder that elections are coming up. If you would like to run for office, contact our election committee chairman, N5WNR, Rick, at 793-1928.

That's it for now! If you want to know more, then I guess I'll see you at the meeting at Favorites Restaurant 36th & S. Western. at 7pm on the first Tuesday of the month.

73 de N5QKI

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## WheatStraw Radio Club

First, I would like to apologize to all cooks. The recipe(Cowless) Cow Patties,the ingredients were correct. Where I goofed was the instructions.It should have read the following. Cream shortening, margarine,and sugars. Add beaten eggs and vanilla. Add flour, baking powder and soda,mixing well. add nuts,coconut,chocolate chips, and corn flakes. Mix well and drop by large spoonfuls on cookie sheet. Spreading each one slightly with back of spoon. Bake at 350F for 15 minutes.

The next meeting will be at Canton,Ok. It is a covered dish dinner,bring a covered dish,or dishes,and your eating set up. Dinner will start at 1:30,pm. Location at the west end of the dam,go west past the engineers headquarters,you will see a sign. Turn on the road just before you get to the sign, go north straight up to the canadain shelter. It is reserved for the Wheat Straw.

In the June 15th WSYI report The FCC is seeking club call sign administrators. In the commissions order authority that the chief, Private Radio Bureau may start taking request for administrators after July 26,1993. At a future date the names and addresses of the selected administrators will be published.

Paul Grauer,WOFIR died June 5th. He was the Midwest Division Director for nearly twenty years. He was born 1911 in Winside Nebraska.

QST has A NEW managing editor. K3KM0 Albert M. Borgdon age 57. Albert's address is at Damascus, Maryland.

June 17 and 18 the VEC s held their annual ham testing conference. Jim Georgias pointed out some of the 5 word code were being improperly Passing. Then the applicants are going toto their doctor to obtain a false claim exemption for the 13 and 20 word per minute telegraphyrequirement. It was recommended the FCC follow up every exempted telegraphy request to verify that the doctor agrees that handicap code is justified. The VEC's adopted a telegraphy examination of one minute of solid copy,or ten questions on the code xam correctly answering seven out of ten.

It seems that the new TS-50S Kenwood Amateur radio will transmit below and above some of the standard ham bands. The dealers recieved some brochures initially stating the fact. The TS-50S would operate above and below the standard U.S. ham frequencies.

Four out of band CB operators have been fined from \$2,000 to \$3,500 dollars. Lonnie N.Gwinn was issued a fine of \$10,000.00 for selling external CB amplifiers at a truck stop in Federal Heights, Co. Margaret G. Taylor at Windermere,FL. owes the Goverment a \$2,000.00 fine for an unlicensed Amateur radio operation.

Congress is expecting President Clinton to sign a bill which will approve a \$11.5 Million dollar supplement this year to the FCC. That is needed to hire two hundred fourty personell to enforce the 1992 cable act. violaters better beware. Time is running out and I have got to go. See you at the next meeting.

73, WASPFK Ralph

Articles for the C&E should be sent to Scott Walsh, 600 Annawood Dr, Yukon, OK 73099 or left in their entirety on the QST bbs at 354-3241. You can also leave your article in N5PHW's Packet Mailbox on 145.03.

**Postmaster: Please send form:**

**3579**

**to 600 Annawood Dr.  
Yukon, OK 73099**

**CORA**

**Collector & Emitter**

(USPS116-150) is published monthly by CORA, Inc. 3913 S. Mabel, OKC OK 73129

**Second Class Postage paid at  
Oklahoma City, OK 73129**

**Postmaster: Send address changes  
to: CORA Collector & Emitter, PO  
Box 95942, Oklahoma City, OK  
73143-5942**

# O.C.A.P.A.

## FIELD DAY

It was a very successful event once again. Even though we had to make a last minute change in sites due to the weather and also had to suffer through another lightening storm and shut down for a period of time, we were still able to score more points this year than last year and were operating in a Lower class. Many folks deserve a hearty thank you for making it the success it was. What would we do without Hal, KB1ZQ, for all the effort he puts out in acquiring tents, tables, chair, water buffalo, generators, and everything else that he is able to secure from work at Tinker. Even though we didn't use the site at K5JL's this year due to the wet conditions, still we want to express our thanks to Jay for preparing the site on his farm. To all the others who furnished equipment, the club is very thankful, KJ0W for antennas, coax and tower; NJ1V for his FT990; AD1S for his mobile home and FT-890; KA5PSF for his FT-990; WZ3F for all the packet equipment; WA5JRH and WA9AFM for the satellite equipment N5VWF for his novice and tech station, and everyone else for antennas and small stuff. And as usual, Joe brought out a good breakfast on Sunday morning. There are many others such as Ruthie for rounding up the grub for sandwiches and snacks.

All the operators are to be commended for hanging in and doing such a fine job. John, NJ1V, and George, AD1S, spent many hours operating CW. Most of all

though, the club really appreciates the effort put out by Perry KB5TOT, Forrest N5VWF and Jeff, WB0GTY, for working the novice and tech station and racking up over 75 contacts on CW. There are others that deserve a thank you which I know I am omitting so thanks to you too whomever you might be.

The sight at Deer Creek School was just fantastic. Everyone did a great job in helping keep the site clean and we were given a green light by the school to use the sight at any time we desire. The only problem was too many cigarette butts left in some places, so everyone needs to learn how to field strip cigarettes again.

After all the above accolades are passed out, one is left. No one deserves more congratulations for a job well done than Larry, KF5JN, who once again served as coordinator for Field Day. Thanks Larry.

Field Day was a lot of fun. For those who didn't make it out, you missed out. Even if you don't do any operating, it is very enjoyable just to visit and watch others exhibit their skills at operating in a contest mode. See you next year.

## JULY MEETING

We had a great meeting as usual. President John put out a lot of effort once again show his leadership ability. A lot of wonderful prizes were given away and we had a lot of fun with the QLF contest. I would like to thank

Clarence, W5LDF, Burt, N5DUQ, John, NJ1V, Perry, KB5TOT, Shannon, KB5RBX and Forrest, N5VWF, for being such good sports and showing their talent in sending code with their left foot. Hopefully everyone enjoyed the show. It was good to have one new (old) member sign up for another year, Burl, N5DUQ. Welcome back Burl. Also, there were a couple of strange faces which we haven't seen at a meeting in a long time Ron, KE5M and Craig, KB5BOB. You know, it's been a long time since I picked on anyone in a severe nature. At first notice, I thought perhaps that Craig had lost some weight but upon further examination I noticed it had shifted to his Big Old Bottom. That's the nicest way I know how to put it. He told me to be sure and not put that in the C & E, but it was too much of a temptation not to. One of these days you will learn Craig.

## GENERAL

I would personally like to express Sue's and my appreciation for all the thoughts and well wishes given to us during the time her mother was in the hospital and upon her passing away.

We were also saddened to learn of the passing of Mac's father in New York..

Jim, KA5PSF, has done a good job serving as the nominating committee. It appears he has a good slate ready for elections at the August meeting. I, like John NJ1V, have decided to turn the

continued on page..... 11



VHF Club  
**NEWS**

**W5LOW**

*The Elmer Gockler Memorial  
Station*

### Minutes of May Meeting

Since President J, KB0QJ, was on vacation, and Vice President Bill, WA5FWD, was out of pocket, I called the meeting to order at 12:03 P.M. with six members present. (Meeting fell on the same date as the Green Country Hamfest.) Minutes for the April meeting were approved. Ellard, W5KE, was at Green Country, so there was no Treasurer's report. Charlie, WA5JGU, gave the CORA report. Fred, W5NL, said he had a "Dandy" birthday last month -- I told him he was out of order. There being no other business, meeting adjourned at 12:08 P.M. So Bob, W5HXL, could show me up with his home brew expanded scale voltmeter.

When he saw my "Ugly Deviation Meter" a couple of months ago, he decided he could make something uglier than I could and proceeded to prove it. His meter was constructed with a cardboard case using only an ice pick and pocket knife for tools. I have to admit that he had some nice cold solder joints in the thing. Nice work Bob!

Joe, K5JB

### Minutes of July Meeting

Meeting was called to order by President J, KB0QJ, at 12:01 P.M. with 15 members and guests present. Minutes were approved as published in the C&E. Treasurer Ellard, W5KE, gave his report, which was approved.

Charlie, WA5JGU, gave the CORA report, including time and location of the QCWA breakfast. Meeting adjourned at 12:05 P.M. and Ray, W5TY passed around some things he had brought for show and tell. Charlie, WA5JGU, related something I thought was funny.

Charlie had responded to a newspaper advertisement for hearing aids priced at about \$190. While talking to the sales-

person, he was asked if he was very hard of hearing. Charlie replied that he was. The salesperson then said he would probably need the \$290 model hearing aid. Charlie asked, "Well, what is the difference between the two models?" The salesperson explained that the \$290 model *pulled* the sound out of the air and *pushed* it in the ear. Charlie then asked, "Well then, is it a *push-pull* amplifier?", and got his hat and left while the puzzled salesperson was thinking of an answer.

Joe, K5JB, Sec'y

### Helen Williams

I regret to say that Helen Williams, Jim, K5VRL's wife, passed away May 20, 1993. Helen was a wonderful amateur radio supporter and Jim's faithful companion on amateur radio outings and events.

Few people know that for several years Helen took care of the arrangements for Ham Holiday Ladies' programs, almost single handed. Many people owe much of their Ham Holiday enjoyment to Helen's generous efforts.

Jim, we sincerely regret your loss, and we will miss Helen. This notice would have been published sooner but for some scheduling problems we had on the VHF club's C&E submission. Nevertheless, I wanted the C&E to recognize Helen for her past efforts, and express my and the VHF club members' condolences for your loss.

Treasurer Ellard, W5KE, arranged to send flowers to the funeral for the club.

Joe, K5JB

### Another Dayton Down!

(This column is a little late, but since it is an annual subject, I thought I would run it anyway so all my IOKK friends could see their names in print!)

As far as Dayton Hamventions go, I would rate this year's a 7, or maybe an 8. The rainy weather was one thing that knocked it down a notch. However, I have certainly been to Hamventions when the rain was much worse, either

colder, or wetter.

This year the weather was dry enough to give us about a day and a half, out of the available three, to comb the flea market. The rain didn't slow Joe, WA5FLT, and me from our rounds but all the vendors had their things covered up when it was raining. That makes it tough to browse. Friday's weather was great, Saturday had intermittent showers, and Sunday had steady downpour. Joe and I just toughed it out under our yellow EAA ponchos.

Another thing that kept this year's Hamvention from being a "10" was that not all of us got vouchers to make the flight for free next year. (Stan, N5JFQ; Aaron, KB5WII, and, Tim, WA5LTM lucked out.)

As usual, there was everything one would desire either in the flea market, or inside with the new stuff. I didn't make any of the meetings or presentations because I was so busy knocking things off my flea market checklist. Joe and I were only able to cover about half of the flea market in the first day. We ran into Elmo, W5JCB, around closing time on Friday and he was trying to hustle up a two-wheel dolly so he could load up some monster goodie he had found. It was Elmo's first Dayton Hamvention, and he didn't mess around boy! He said he had covered the whole flea market the first day! That guy's a pro, eh?

I got to see and handle the portable frequency counters I was desiring and bought a Startek model ATH-30 with a high accuracy time base. My old counter still worked but was getting rather long-toothed. I had to calibrate it any time I wanted to make a measurement on 450 MHz and it was getting to be a pain. This new one looks as if it is going to work out very good.

Joe and I only ran inside (the dealer area) long enough to check on a couple of our friends and say Hi to them. Andy Demartini, KC2FF, (DRSI) convinced me that I needed a DPK-9600 modem for packet radio. I picked one up because "it was a

*good deal!"* (I later got a second one, but more about that next month.) I visited awhile with Chuck, KP4DJT, who is working for Pac-Comm and living in Tampa FL. He also wanted me to pass along his hello to his OKC friends. Chuck and I pass regular messages between his TCP/IP station and mine.

I rounded out my shopping list with some type N connectors for 9913 coax and a couple of computer goodies. I could have done without the latter but, again, *"They were good deals!"* Thanks to Chas, KA5UPM, who hauled our bulky items home, I didn't have to carry all the stuff home on the plane.

As usual, the International Order of Krazies (IOOK) had its gathering at Keith, WA8ZWJ; and, Marian, WD8CJD's house and a good time was had by all. I got to see some of the classic Krazies, including Hoss, WA5ZAI, who gave me a hat to commemorate my retirement, and asked that I pass along his greetings to the OKC gang.

After I got home, I got two good days in playing with my new goodies before a cold and secondary infection hit me and took me out of circulation. But, that is another story. (You don't suppose someone of those 35,000 attendees had a cold, do you?)

I guess I might as well plan on going again next year, heh! Joe, K5JB

### **Icom IC-2 & IC-4 - Frequencies**

Once the new frequency counter I bought at Dayton was verified, I went on a binge checking and resetting all my UHF and VHF FM gear. Two of the radios I put on frequency are kind of tricky to set so I thought I would share the tricks with you.

The Icom IC-2 and IC-4 series talkies each use four crystals to set the receivers, the various transmitter offsets, and the plus 5 kHz setting. Each crystal has a pair of inductors that are split in such a way to provide the +5 kHz shift when you call for it. The locations of these induc-

tors are shown on page 20 of the IC-2 instruction manual, and on page 19 of the IC-4 manual. The two illustrations on this page also show the relevant parts.

The service manual I have for the IC-4 does not detail the correct order for setting the radio on frequency for the various modes so you have to examine the schematic to work out the correct order. Without going into the reasoning, I will just give the correct order to save a little space. Also, I will assume the other adjustments, like VCO tuning range, are in normal working condition.

First, here are a couple of tips on gaining access to the PLL circuit board. Remove the two case screws and the four bottom screws that hold the battery flange. Carefully lift the lower part of the case front outward and pull it downward to disengage it from the top of the case. Only lift it off the radio far enough to allow sliding the push to talk bar out of the back case half. (Notice which end of the PTT bar goes up.) After you remove the PTT bar, put the case front back in place and remove the back case. Now you can handle the radio without damaging the wiring to the case front. Examine the slugs in the tuning coils and note how small the slots are, and note that they are almost square. I recommend carefully filing a plastic tuning tool to fit this slot. You can use a jeweler's screwdriver, but you risk breaking a slug, and you will have to compensate for using the metal tool. Arrange to clip +8.4 VDC to the battery contact, and minus power to the radio frame.

Now you are ready to start measuring and setting frequencies. Let's start with the IC-2, and we will start by setting the receiver frequency.

Set the thumb wheel switches to 145.000 and turn on the +5 kHz switch. With a probe, pick up the receiver local oscillator frequency on the crystal can located in the lower left hand corner of the PLL board. Look for a frequency of 134.310 MHz. If you don't read something close to this at the crystal can, you will have to probe around the components in this area until you pick up a signal. If you can't

pick up a signal, you may just have to skip the receiver frequency setting. Adjust L11 to get a local oscillator frequency of 134.310. Turn off the +5 kHz switch and adjust L7 for a local oscillator frequency of 134.305 MHz. You're done with the receiver.

Switch the simplex-duplex switch to simplex, turn on the +5 kHz switch, and switch the power switch to low power. Key the radio and tune L12 for 145.005. Then switch off the +5 kHz switch and tune L8 for 145.000. Switch the simplex-duplex switch to duplex, the offset to +600, and turn on the +5 kHz switch. Tune L13 for 145.605. Switch off the +5 kHz switch and tune L9 for 145.600. Switch the offset to -600 and turn on the +5 kHz switch. Tune L14 for 144.405. Switch off the +5 kHz switch and tune L10 for 144.400. You're done.

On the IC-4, you have to remove a pressed-on shield to gain access to the top of R36 where you can pick up the receiver local oscillator. Set the thumbwheel switches to 445.000 and turn on the +5 kHz switch. Tune L13 for a receive local oscillator frequency of 423.205 MHz. Turn off the +5 kHz switch and tune L9 for L.O. of 423.20. Reinstall the pressed-on shield.

In the following, some of the transmit frequencies are on the band edge or out of band. You really should use a dummy load, or twiddle with the MHz thumbwheel switches to keep inside the band. I'll let you decide which method you want to use but for illustration I will leave the thumbwheel switches set to 445.000.

Switch the simplex-duplex switch to simplex and turn on the +5 kHz switch. Tune L15 for an output frequency of 445.005. Turn off the +5 kHz switch and tune L11 for a frequency of 445.000. Switch the simplex-duplex switch to duplex, switch the offset to -5 MHz and turn on the +5 kHz switch. Tune L14 for an output of 440.005. Switch the +5 kHz switch off and tune L10 for 440.000. Switch to the +5 MHz offset and turn on the +5 kHz switch. Tune L16 for an out-

put frequency of 450.005. Turn off the +5 kHz switch and tune L12 for 450.000. You are done with the IC-4.

To reassemble the case, loosen the front, put the back in place, and slide the PTT bar back in place taking care not to mess up the PTT spring. Now you can put the front in place and reinstall all the screws.

Icom made life easier on the later model radios. The IC-02 and IC-04 are set with just one trimmer capacitor. The easiest was the IC-24, which was already within 100 HZ of being on frequency so it didn't require fiddling with! Joe, K5JB

### More on Counter

This Startek I obtained at Dayton, and I assume similar counters, have extremely high gain front end amplifiers to enable picking up off the air signals. Because of this gain, and some design instability, the amplifier tends to oscillate at the resonant frequency of whatever is attached.

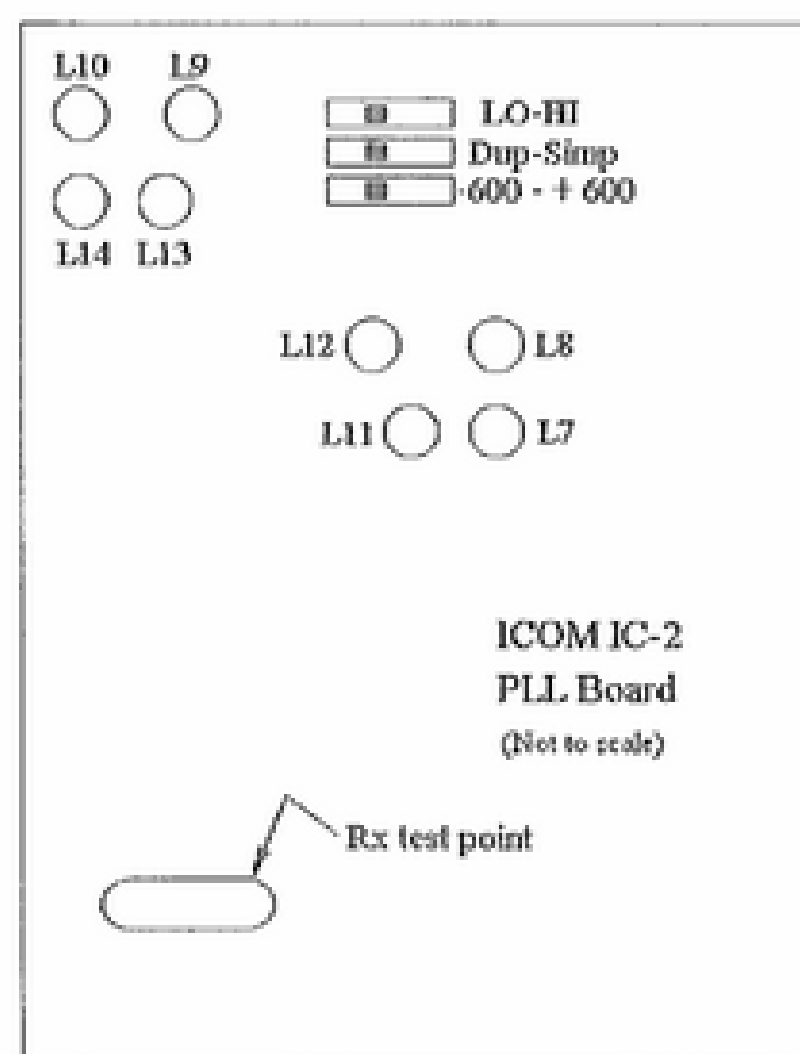
This oscillation creates a problem in measuring HF signals because the oscillation at the frequency of the test lead tends to mask the weaker signal from an circuit under test.

The solution I came up with was to use an Oscilloscope probe. The one I happened to have is a 1:1 probe which has about 100 Ohms per foot of lead length. This resistance was designed into the probe lead for precisely the reason I needed it. It dampens the amplifier input enough to prevent the oscillations.

To calibrate a frequency counter, I connect it to a 10 MHz crystal oscillator which I then tune to obtain a beat in a receiver tuned to WWV. By trimming the oscillator, listening to the swishing beat in the receiver and watching the counter I can guess to about 0.05 parts per million. My new counter was dead on as far as I could tell. That high accuracy time base was a good investment! Joe, K5JB

### 9600 Baud Packet Radio

They say that 9600 baud (and faster) packet radio will eventually become

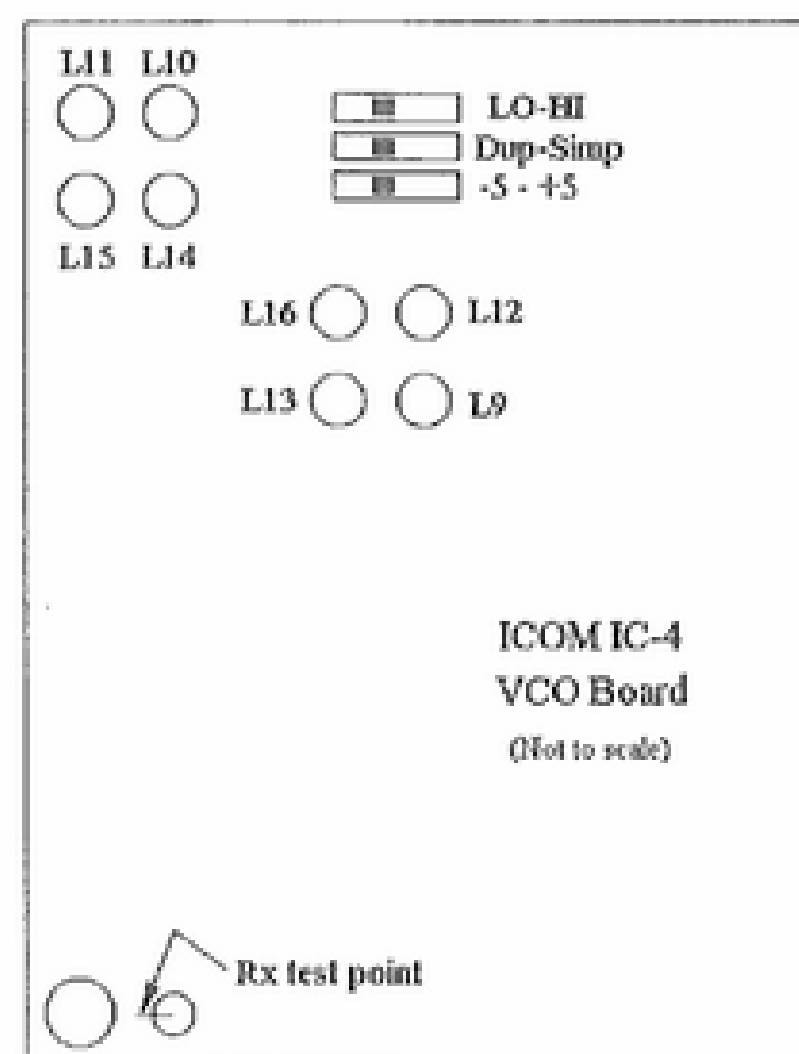


"plug and play" but I don't think it has happened yet, unless you consider the DRSI Alinco deal (more on that later). This month, I hooked up a couple of 2 Meter radios to 9600 baud modems and managed to get them to play, but not as good as they should. For those of you who are thinking of adventuring into the 9600 baud 2 meter packet arena, I will, for the next couple of months, share some of my experience.

Incidentally, in this context the term "9600 baud" is correct. In the land line telephone world it would be 9600 bits per second, but on the radio, we are sending one signal transition per bit. Baud is defined as a signal transition per second.

Most people consider 9600 baud packet operation to be the domain of the network backbone, and it intuitively seems correct because backbones do combine streams from multiple sources, presumably at slower speeds. However, to provide more effective connections to systems with voluminous data like BBSs, the higher baud rates make sense if you want to make more effective use of the spectrum.

At Dayton, Andy Demartini, KC2FF, owner of DRSI, showed me his company's new 9600 baud modem design, the DPK-9600, and the modem-radio combination DRSI is selling, all set up for 2 meter 9600 baud packet. The radio is the popular Alinco 2M set. Andy's deal is



only the first of several that are bound to happen -- deals where "technically challenged" amateurs can just dig into their pockets and buy what their patience (or wits) otherwise deny them. Sooner or later somebody is going to acquire a 9600 baud 2M packet setup and ask, "I do now that I have this thing?"

Well, 9600 and 1200 baud packet don't co-exist on the same frequency because with the current designs neither recognize the presence of the other, and they jam each other by transmitting on top of each other. They must be run on different frequencies from each other, unless you take special precautions. I decided I would take some special precautions and put Oklahoma's first 9600 baud 2M station on the air. I put it on 146.415, the first frequency we used for packet in Oklahoma, which is incidentally still being used at 1200 baud by the K5JB Apple BBS. I put one 9600 baud TNC on the same radio as the Apple BBS, and put a second station together to do testing.

Since I am not completely satisfied with the way the 9600 baud system is working, I don't have all the answers yet, and will probably continue with this subject next Month. If you happen to fire up a rig on 2M 9600 baud packet give me a shot on 146.415. I am using K5JB on that TNC and you will probably get the mailbox if you are successful. Leave me a message!

Joe, K5JB

# ORSI

May 10, 1993 Edition

Member MACC - Mid America  
Coordination Council

*Oklahoma Repeater Society Inc.*

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OUTPUT LOCATION	RPCALL	AREA
29.640 Tulsa	WB5VXK	TULSA
52.525 Oklahoma City	K5JL	OKLAHOMA CITY
53.010 Oklahoma City	WA5CZN	OKLAHOMA CITY
53.050 Mustang	KB5XM	OKLAHOMA CITY
53.650 Claremore	N5PCZ	TULSA
53.750 Oklahoma City	K5JL	OKLAHOMA CITY
145.110 Davis	KD5XW	SOUTH CENTRAL
145.110 Cleveland	WB5MPU	TULSA
145.130 Chouteau	K5TTG	NORTHEAST
145.130 Chickasha	WA0AQO	OKLAHOMA CITY
145.150 Edmond	WA5CZN	OKLAHOMA CITY
145.170 Tulsa	N5NNF	TULSA
145.210 Cookson	W5TQE	EAST CENTRAL
145.210 Oklahoma City	WD5FEI	OKLAHOMA CITY
145.230 Blackwell	N5ANV	NORTH CENTRAL
145.250 Pawhuska	KY5J	NORTHEAST
145.250 Oklahoma City	KA5ZYM	OKLAHOMA CITY
145.270 Tulsa	N5FWX	TULSA
145.290 Enid	W5HTK	NORTH CENTRAL
145.310 Blackwell	WB5MRE	NORTH CENTRAL
145.310 Lawton	N5VBP	SOUTHWEST
145.330 Oklahoma City	WN5J	OKLAHOMA CITY
145.350 Stillwater	WB5KQL	NORTH CENTRAL
145.370 Oklahoma City	N5KUE	OKLAHOMA CITY
145.370 McAlester	W5CUQ	SOUTHEAST
145.370 Nowata	K4RGV	NORTHEAST
145.390 Shawnee	W5SXA	OKLAHOMA CITY
145.410 Poteau	KA9HJP	EAST CENTRAL
145.410 Oklahoma City	K5VFN	OKLAHOMA CITY
145.430 Atoka	WB5VUE	SOUTHEAST
145.430 Sapulpa	KF5YP	TULSA
145.450 Fairview	WK5V	NORTHWEST
145.450 Owasso	N5FER	TULSA
145.470 Blanchard	KB5BS	SOUTH CENTRAL
145.470 Tulsa	AB5M	TULSA
145.490 Oklahoma City	WA5EYV	OKLAHOMA CITY
145.490 Antlers	KI5KC	SOUTHEAST
146.610 Hugo	KB5JTR	SOUTHEAST
146.625 Holdenville	WB5OFC	SOUTHEAST
146.640 Cavanal Mtn	N5ZS	EAST CENTRAL
146.640 Kingfisher	WD5GLD	OKLAHOMA CITY
146.640 Granite	W5CHE	SOUTHWEST
146.655 Bartlesville	W5NS	NORTHEAST
146.655 Coalgate	KA5CXT	SOUTHEAST
146.670 Oklahoma City	N5VYC	OKLAHOMA CITY
146.685 Eufaula	W5JDH	EAST CENTRAL
146.700 Oklahoma City	WD5FEI	OKLAHOMA CITY
146.700 Tulsa	K5LAD	TULSA
146.715 Stillwater	W5YJ	NORTH CENTRAL
146.730 Woodward	WA5PLW	NORTHWEST
146.730 Duncan	WD5IYF	SOUTH CENTRAL
146.730 Clayton	WA7WIY	SOUTHEAST
146.745 Muskogee	W5EJK	EAST CENTRAL
146.760 Bartlesville	W5NS	NORTHEAST
146.760 Oklahoma City	KB5XM	OKLAHOMA CITY
146.760 Elk City	WB5FBU	WEST CENTRAL

OUTPUT LOCATION	RPCALL	AREA
146.775 Mounds	WB5NJU	TULSA
146.790 Ardmore	W5BLW	SOUTH CENTRAL
146.790 Altus	WB5KRH	SOUTHWEST
146.805 Lawton	N5PYD	SOUTHWEST
146.805 Tulsa	WA5LVT	TULSA
146.820 Oklahoma City	K5JL	OKLAHOMA CITY
146.835 Tulsa	N5OHM	TULSA
146.850 Muskogee	W5EJK	EAST CENTRAL
146.850 Oklahoma City	W5PAA	OKLAHOMA CITY
146.865 Tushka	KI5JP	SOUTHEAST
146.880 Norman	N5MS	OKLAHOMA CITY
146.880 Tulsa	WA5LVT	TULSA
146.895 Miami	WB5OKX	NORTHEAST
146.895 Taloga	N5KTO	NORTHWEST
146.895 Ada	KA5CXT	SOUTH CENTRAL
146.910 Lawton	W5KS	SOUTHWEST
146.910 Broken Arrow	WA6HNO	TULSA
146.925 Oklahoma City	N5VYC	OKLAHOMA CITY
146.940 Enid	W5HTK	NORTH CENTRAL
146.940 Tulsa	WA5LVT	TULSA
146.955 Piedmont	KB5XM	OKLAHOMA CITY
146.970 Ponca City	W5HZZ	NORTH CENTRAL
146.970 Ardmore N5AO	SOUTH	CENTRAL
146.985 Pawhuska	KY5J	NORTHEAST
146.985 Oklahoma City	W5NZS	OKLAHOMA CITY
147.000 Anadarko	WA5ERM	SOUTHWEST
147.000 Tulsa	NE5Z	TULSA
147.000 Tulsa	NE5Z	TULSA
147.015 Seminole	WD5FHR	WEST CENTRAL
147.030 Oklahoma City	WD5AI	OKLAHOMA CITY
147.045 Cyril	KB5LLI	SOUTHWEST
147.045 Tulsa	N5RFW	TULSA
147.060 Pryor	KB5ZB	NORTHEAST
147.060 Norman	N5BEW	OKLAHOMA CITY
147.075 Tulsa	N5OHM	TULSA
147.075 Fairview	WK5V	NORTHWEST
147.090 Claremore	N5OK	NORTHEAST
147.090 Choctaw	AB5H	OKLAHOMA CITY
147.120 Fort Supply	WA5PLW	NORTHWEST
147.135 Edmond	KA5WIS	OKLAHOMA CITY
147.150 Enid	W5HTK	NORTH CENTRAL
147.150 Grove	K5PJR	NORTHEAST
147.150 Guymon	KY5C	PANHANDLE
147.150 Sulphur	KA5DAV	SOUTH CENTRAL
147.165 Shawnee	WN5Z	OKLAHOMA CITY
147.180 Yukon	AA5GB	OKLAHOMA CITY
147.195 Seminole	K5VHU	OKLAHOMA CITY
147.210 Oklahoma City	K5JL	OKLAHOMA CITY
147.225 Okmulgee	W5GA	EAST CENTRAL
147.240 Tahlequah	WA6EAW	EAST CENTRAL
147.240 El Reno	KG5AA	OKLAHOMA CITY
147.255 Stillwater	K5FVL	NORTH CENTRAL
147.270 Pawhuska	N5ZQW	NORTHEAST
147.270 McAlester	N5JMG	SOUTHEAST
147.270 Anadarko	WG5M	SOUTHWEST
147.285 Ada	WB5NBA	SOUTH CENTRAL



OUTPUT LOCATION	RPCALL	AREA
147.300 Purcell	NF7T	SOUTH CENTRAL
147.320 Newcastle	WB5EDN	OKLAHOMA CITY
147.330 Muskogee	WA5VMS	EAST CENTRAL
147.330 Cache	N5PTV	SOUTHWEST
147.340 Oklahoma City	WD5AII	OKLAHOMA CITY
147.345 Tulsa	NE5Z	TULSA
147.360 Big Cabin	WA5ICW	NORTHEAST
147.360 Sharon	NC5C	NORTHWEST
147.360 Chandler	WB5EDN	OKLAHOMA CITY
147.360 Lawton	KD5RQ	SOUTHWEST
147.375 Enid	N5HEL	NORTH CENTRAL
147.375 Texhoma	W0PFJ	PANHANDLE
147.390 Forgan	N5AKN	PANHANDLE
147.390 Durant	K5CGE	SOUTH CENTRAL
147.390 Lawton	AB5J	SOUTHWEST
147.390 Tulsa	WB5NJU	TULSA
224.060 Spencer	KI5CW	OKLAHOMA CITY
224.160 Chandler	WA5CZN	OKLAHOMA CITY
224.200 Oklahoma City	AH9B	OKLAHOMA CITY
224.340 Muskogee	W5EJK	EAST CENTRAL
224.380 Oklahoma City	W5PAA	OKLAHOMA CITY
224.440 Oklahoma City	K9KK	OKLAHOMA CITY
224.600 Stillwater	W5YJ	NORTH CENTRAL
224.600 Durant	N5KFS	SOUTH CENTRAL
224.700 Norman	N5JBK	OKLAHOMA CITY
224.760 Poteau Mtn	N0EOQ	EAST CENTRAL
224.840 Edmond	N5PTE	OKLAHOMA CITY
224.860 Poteau	WC5I	EAST CENTRAL
224.880 Oklahoma City	WN5J	OKLAHOMA CITY
224.940 Enid	W5HTK	NORTH CENTRAL
224.960 Edmond	WA5CZN	OKLAHOMA CITY
421.250 Tulsa	WA5LVT	TULSA
439.250 Guthrie	KA5EOS	OKLAHOMA CITY
442.025 Pawhuska	KY5J	NORTH CENTRAL
442.075 Claremore	N5PCZ	TULSA
442.100 Norman	N5TKS	OKLAHOMA CITY
442.150 Oklahoma City	KA5ETA	OKLAHOMA CITY
442.250 Oklahoma City	KG5AA	OKLAHOMA CITY
442.350 Blackwell	N5ANV	NORTH CENTRAL
442.500 Oklahoma City	N6JFM	OKLAHOMA CITY
442.625 Oklahoma City	WB5ISN	OKLAHOMA CITY
442.625 Sand Springs	WB5ISN	TULSA
442.700 Oklahoma City	W5PAA	OKLAHOMA CITY
442.850 Edmond	KB5SCG	OKLAHOMA CITY
442.900 Edmond	N5PTE	OKLAHOMA CITY
443.000 Chester	WD5GUG	NORTH CENTRAL
443.000 Tulsa	N5RFW	TULSA
443.100 Muskogee	WA5VMS	EAST CENTRAL
443.100 Oklahoma City	WN5J	OKLAHOMA CITY
443.150 Edmond	KA5WIS	OKLAHOMA CITY
443.200 Enid	WD5GUG	NORTH CENTRAL
443.300 Cleveland	WB5MPU	TULSA
443.400 Yukon	AA5GB	OKLAHOMA CITY
443.400 Tulsa	N5LWO	TULSA
443.500 Oklahoma City	K5EBT	OKLAHOMA CITY
443.550 Oklahoma City	WD5CIG	OKLAHOMA CITY
443.600 Enid	W5QMJ	NORTH CENTRAL
443.800 Ada	WB5NBA	SOUTH CENTRAL
443.850 Lawton	KD5RQ	SOUTHWEST
443.900 Oklahoma City	AD1S	OKLAHOMA CITY
443.975 Tulsa	WA5LVT	TULSA
444.000 Broken Arrow	WA6HNO	TULSA
444.000 Del City	WR5G	OKLAHOMA CITY
444.100 Altus	WD5BBN	SOUTHWEST

OUTPUT LOCATION	RPCALL	AREA
444.100 Oklahoma City	N5VYC	OKLAHOMA CITY
444.100 Tulsa	WA5LVT	TULSA
444.150 Grove	K5PJR	NORTHEAST
444.150 Norman	WB5FWE	OKLAHOMA CITY
444.200 Oklahoma City	WD5AII	OKLAHOMA CITY
444.200 Tulsa	WB5ISN	TULSA
444.250 Chouteau	WA5NKR	NORTHEAST
444.300 Oklahoma City	K5JL	OKLAHOMA CITY
444.300 Tulsa	K5LAD	TULSA
444.350 Norman	N5KUK	OKLAHOMA CITY
444.350 Claremore	WA5VPO	TULSA
444.400 Enid	WA5OUB	NORTH CENTRAL
444.425 Spencer	KI5CW	OKLAHOMA CITY
444.450 Tulsa	WA5ICW	TULSA
444.500 Cavanal Mtn	N5ZS	EAST CENTRAL
444.500 Bethany	N5HIP	OKLAHOMA CITY
444.500 Fort Towson	KB5MGO	SOUTHEAST
444.525 Coweta	NM5X	TULSA
444.550 Maysville	NF7T	SOUTH CENTRAL
444.600 Hitichita	N5TZA	TULSA
444.675 Newcastle	KB5LSB	OKLAHOMA CITY
444.700 Ponca City	W5TXF	NORTH CENTRAL
444.725 Tulsa	WV5T	TULSA
444.750 Norman	N5KUK	OKLAHOMA CITY
444.775 Bartlesville	WD5DWT	NORTHEAST
444.775 Dougherty	KB5CEN	SOUTH CENTRAL
444.825 Enid	N5HEL	NORTH CENTRAL
444.825 Duncan	WD5IYF	SOUTH CENTRAL
444.850 Oklahoma City	WA5CZN	OKLAHOMA CITY
444.875 Woodward	WN5LUI	NORTHWEST
444.900 Stillwater	K5FVL	NORTH CENTRAL
444.925 Oklahoma City	KB5XM	OKLAHOMA CITY
444.950 Tulsa	WA5LVT	TULSA
444.975 Guymon	KY5C	NORTHWEST
444.975 Kingfisher	WD5GLD	OKLAHOMA CITY
449.650 Chandler	WD5CIG	OKLAHOMA CITY
449.875 Tulsa	N5JJZ	TULSA
921.500 Enid	W5QMJ	NORTH CENTRAL
1282.100 Mustang	WB9VMY	OKLAHOMA CITY
1283.100 Oklahoma City	WN5J	OKLAHOMA CITY

### Oklahoma All Counties except Northeast Counties

#### Frequency Coordinator

**Glen Turner, NF7T**

**State Frequency Coordinator**

**RR 1, Box 53**

**Purcell, Oklahoma 73080**

**(405) 527-7104**

**Northeast Oklahoma Counties** *Adair, Cherokee, Craig, Creek, Delaware, Haskell, Mayes, McIntosh, Muskogee, Nowata, Okfuskee, Okmulgee, Osage, Ottawa, Pawnee, Rogers, Sequoyah, Tulsa, Wagoner & Washington.*

#### Assistant Frequency Coordinator

**Vince Moore, N5RFW**

**Assistant State Frequency Coordinator**

**5613 South 66th West Avenue**

**Tulsa, Oklahoma 74107**

**(918) 446-6451**



## Door Prizes won at Ham Holiday.

TCKT	Prize	Winner
2075	"Stitches" Hat	Jack Moore
1290	Nuts and Volts sub.	Thelma Clark
2256	Hat	W5SX
1614	N&V subscription	K5JQH
1431	Larsen Mug	K5PER
1460	CD-ROM	N5SKP
1558	Mug	Bethany Falkner
1047	Shell Printing QSL's	KB5VJR
2380	Mug	N5ZHR
1668	QSL's	AA5TY
2698	T-shirt	KB5UKU
1267	Rptr Directory	WD5GLA
1163	Keyring	K5SKA
1358	Call Map	KB5UJX

## People who should have claimed a prize.

2146	Keyring	KB5VWI
1239	Directory	W5VSW
2580	Shell QSL's	Truman Lewis
2554	N&V subscription	Ed Ellison
2586	QSL's	KB5RZT
2665	T-shirt	N5YSM
2604	Mug & T-shirt	AA5JV
1089	Mug & T-shirt	N5TVL
1131	QSL's	KB5VDN
1626	Rptr. Directory	Crum, XYL
2506	N&V subscriptions	Tom Spencer
1284	QSL's	NZ5T
1495	Headset	KD5EP

## Grand Prize Awards...

1304	WX Monitor	WB5ZKV
1267	WX Monitor	WD5GLA
2669	Oscillator	KB5WIE
	CW Tapes	KB5ODR
1522	Freq. Counter	WA5ZSH
1365	Dir/Clock	Diana Lowcock
1380	Tapes/ Books	N5SPA
1424	Remote Microphone	WA5PFK
1049	Battery Pack	K5KDR
2720	Scanner	Richard Roger
2428	Books/ Tapes	WD5FAM
2081	Dual band mag. mount	K15VH
1253	2m amp	N0ELS
1162	Freq. Counter/QSL's	WA5DJQ
2235	Power Supply	WB5EQR
2699	T-shirt/QSL's/keyer	N5QEB
1003	Map/Freq. Counter	WN5T
1271	Book/Filter/Jewelry set	Ophelia Bruning
1289		W5ZKK
1451	Handbook	N5WNL

1239	Books	W5VSW
1139	Books	N5VOF
1312	Antenna	Jimmy?
2300	Antenna book/\$20 gift certifcat.	N5WNR
2187	Dipole	Janna Ridley
2560	Antenna	KC5JJ
1339	keyer/clock	N5WKW
2136	Clocks	KB5JWN
1163	Clock/Ant/SW	K5SKA
1273	Clock/Meter	AB5HM
2101	Sub/Power Supply	N5RHD
2704	Power Supply	N5YNR
2307	Battery pack	N5RHD
1178	Antenna	Jean Pace
	O-scope	AA5NN
1272	Dummy load, etc...	W5QVS
1487	Dummy load, etc...	KG5UK
1638	Dummy load, etc...	KB5ENP
2267	Hand Held Stand	N5OTT
1468	Books	WA5ROJ
1561	Dummy load	KG5VZ
1393	Fiction Books, Headset	KA5ETA!
2749	Books	KA5ENU
1045	Books/deskplate	K5LDL
1554	Antenna	N5VVV
2358	Antenna	N0GGO
2137	TNC	N4DAX
2481	TNC	David Daniels
1385	Isopole	W05B
1062	Tuner	NT5M
1326	TH-225a	WB5DXZ
2184	DJ-560	R.K. Allen
1303	2m/TNC/Computer	KG5AE

## Pre-Registration winner!

1478 FT-747GX WB5WSI

## Grand Prize Winner!!

2543 IC-735 KB5ACS

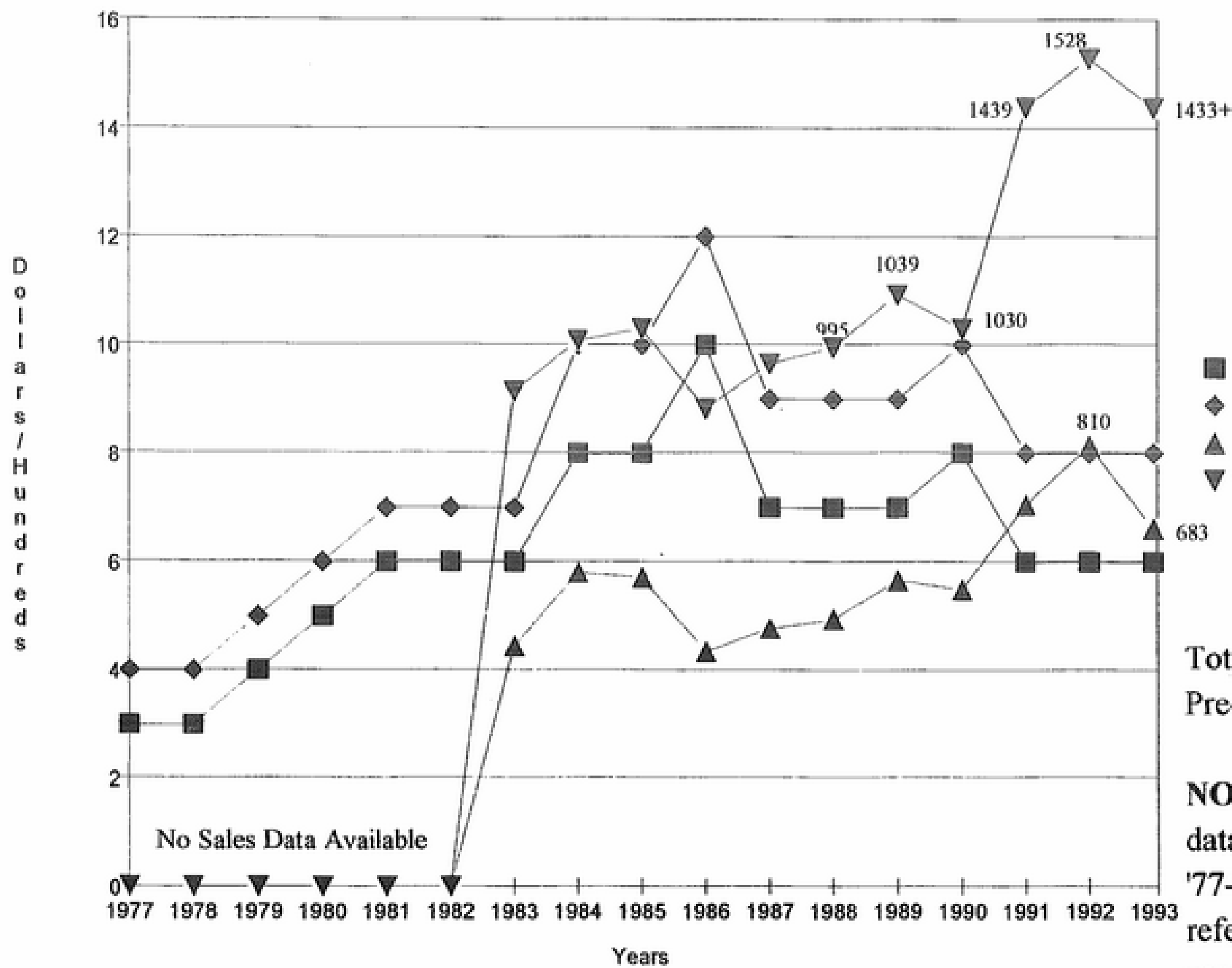
## Scholarship Awards

Lisa White	CORA	\$500
John Doe	CORA	\$500
Brandy Green	EARS	\$200

## Others...

Scholarship Award	W5GM	Jack Grant
	Donated award to CORA	
MORI DF-1	KB5MAC	Bob Landreth
"Stitches Jacket"	Denise Jones	
Youngest Novice N.C.	Jason Brassfield	Tech. Book
Oldest Novice	KB5PPN/Cecelia Mayse	Tech. Book
Oldest General	N5KLU/Harry Holzman	Advanced Book

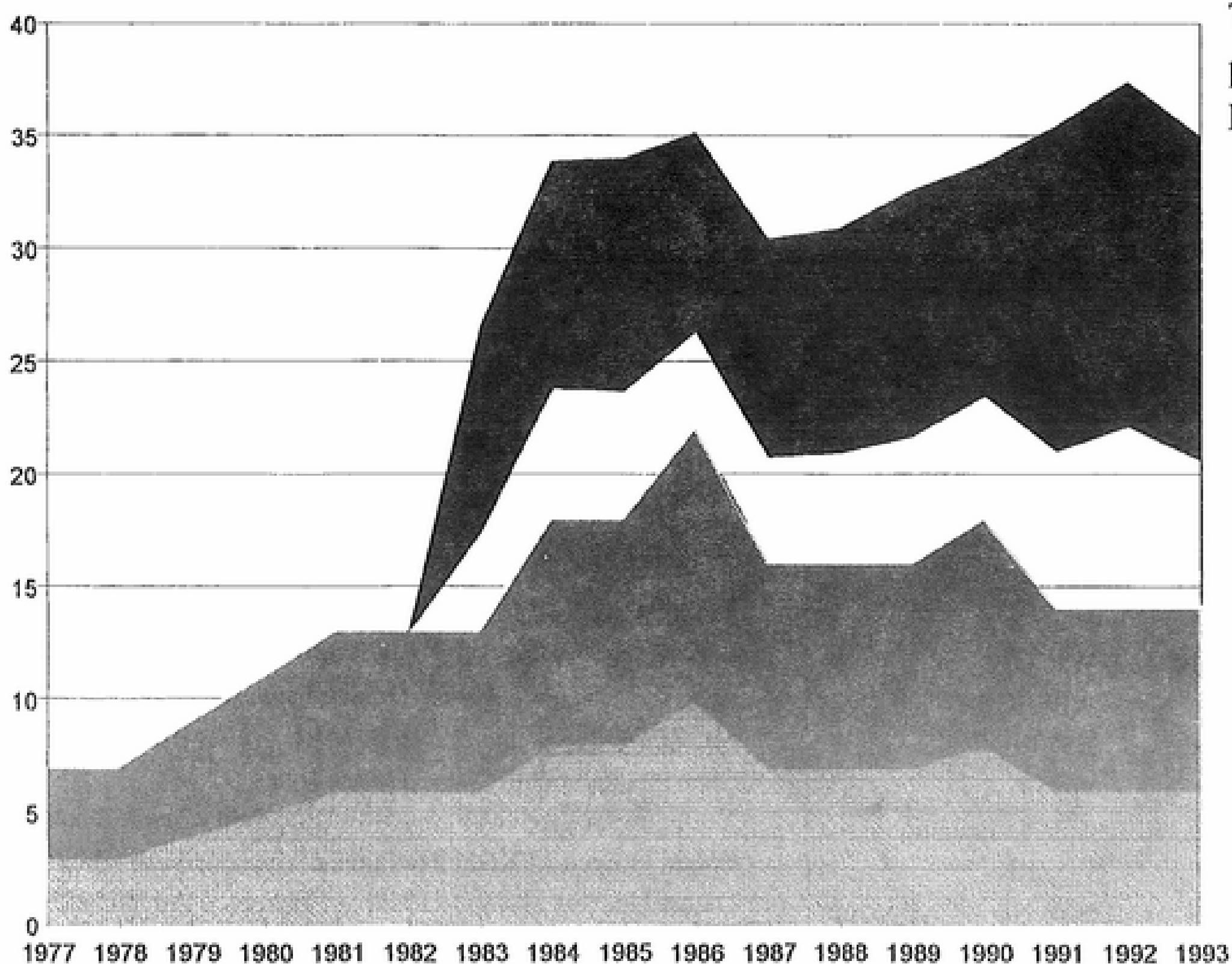
## Ham Holiday Statistics



**Ham Holiday 1993**  
 Total Attendance > 1433  
 Pre-Registrations = 683

**NOTE:** There are no sales data available for the years '77-'81 therefore the reference for those years is zero.

## Ham Holiday Statistics



This area graph shows ticket price vs. attendance for both Pre-Regist. and the Door.



## OCAPA continued...

reins over to someone else for the coming year. I have enjoyed serving as the vice-president the past year and I am positive that the new president and vice-president will do an admirable job.

Everyone should be making plans to attend the August meeting for the elections and also the drawing for the grand prize of the Icom 229A. This is a fund raising venture for the club. Make plans now to come and help the club out by purchasing a few extra tickets.

By the time this is published everyone should have enjoyed another Ham Holiday and bought all the new goodies they have been planning for. Hopefully Ham Holiday was another huge success. K5NK

Minuets of the OCAPA meeting July 20th, 1993.

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

The minuets of the last meeting were read by John, N5SAM, seconded and passed.

Treasurers report was read by Mike, N5VIT, seconded and accepted.

TECHNICAL COMMITTEE - Mike, N5VIT, wants to have the feedline party July 31st. (Weather and winds permitting.)

FIELD DAY COMMITTEE - Larry, KF5JN, thanked everybody for participating in field day. As a

2A station we have tentative score of over 5100. A motion was made to change the Field Day site to the Deer Creek site, but was withdrawn and left to the discretion of the Field day Committee.

EDUCATION COMMITTEE - Brad, KJ0W, didn't have a class this month, but plans a session on antenna theory for August. Classes run from 6 to 7pm and the meeting starts at 7:30pm.

EQUIPMENT COMMITTEE - Ed, WA5YDF, and Larry, KF5JN, recommended purchasing additional coax, some tower sections and another HF antenna for the Emergency trailer.

## PUBLIC SERVICE/INFORMATION COMMITTEE

Tom, WA9AFM, told us that CH. 9 covered the OCAPA field day but was pre-empted.

INTERFERENCE COMMITTEE Hank, WA5JRH, and the troops tracked a bogus operator July 16th. He tried to tell us he was licensed by civil air patrol but that turned out false also.

NEW BUSINESS - Clarence, W5LDF, told us of Leonard W5MEL's XYL being seriously ill. Joe, N6CL, reminded us that the VHF society convention is July 31st through Aug. 1st in OKC. Chuck, K5NK, announced that Robert, N5QKI, passed his 20wpm cw test.

The program was provided by

Chuck, K5NK. He demonstrated the theory in (QLF) cw operating. He got Shannon, KB5RBX, Forest, N5VWF, Perry, KB5TOT, John, NJ1V, Clarence, W5LDF to attempt to send a sentence using a special key and their left foot. (QLF).

NOMINATION COMMITTEE - Jim, KA5PSF, announced the committee results:

PRES: Brad Nelson, KJ0W

VPres: Jim Richardson, N5OHL

SEC: John Brassfield, N5SAM and Tom Webb, WA9AFM.

Tres. Mike Begley, N5VIT and Loyd Hargrove, AB5I

MOTION: to reserve 3 tables at Ham Holiday under OCAPA's name, seconded and passed.

The July Prizes went to:

Dual Band ANT - N5KLN

ISOBAR Surge Supres - KB5VQL

Memorex outlet strip - W1AS

12v Power Pack - KB5BOB

Repeater Directory -KB5WIC

DX Logs - K5SKA and KB5RBX

Grand Prize of an ICOM 2m mobile will be drawn at the August meeting.

Attendance - 49

Meeting adjourned at 8:50pm

John Brassfield, N5SAM  
Secretary

<b>1. Aeronautical Center ARC</b> Meets: First Thursday, Flight Standards Building, FAA, South MacArthur, 7:00 P.M. Pres: Jack Iman, WB5SVN Sec/Tr: Brad Nelson, KJ0W AstVP: Harold Todd, WA5VAQ 685-3685 AstVP: Charlie Greene, WA5JGU 943-5631 Editor: Jack Iman, WA5SVN	<b>7. Bicentennial (76'ers) ARC</b> Meets: 7:30 P.M. 2nd Tues, 1801 N Lincoln Blvd Parking in rear Pres: Hank Stokes, KB5XM VP: Chad Drewery, N5QIQ Treas: Sec: Jack Conley, AA5VU Editor: Not filled	<b>14. Cimmaron ARS</b> Meets: 7:30 P.M. second Thurs. WX5Y Playhouse 827 S 13, Fairview Area code 405: Pres: Terry McColl, N5MLT 227-3672 VP: John Medley, N5WVU 227-3534 Sec: Dennis Painton, WK5V 764-3599 Treas: Nadine Painton, N5FMH 764-3599 Editor: John Medley, N5WVU 227-3534
<b>2. Central Oklahoma VHF</b> Meets: 11:00 A.M. 3rd Sat., Golden Skillet 3401 N. Classen Blvd, OKC Pres: J Frank Fields, KB0QJ 789-8469 VP: Bill Noland, WA5FWD 354-5018 Sec: Joe Buswell, K5JB 732-0676 Treas: Ellard Foster, W5KE 789-6702 Editor: Joe Buswell, K5JB 732-0676	<b>9. Wheatstraw ARC</b> Meets: 2:30 P.M. 2nd Sunday, Location Varies. See club section for details. Pres: Ray Barnes, AB5Z, Longdale 274-3334 VP: Neal Kappus, N5KCO 262-1551 Sec/Tr: Joe Garland, WA5PLT, Calumet 893-2660 Editor: Ralph Wilder, WA5PFK, Watonga 623-5421	<b>15. South Canadian ARS</b> Meets: 9:30 A.M. Second Saturday, Red Cross Bldg. North OU Campus, Norman Pres: Don Schader, K15TP 321-9649 VP: Mike Winkel, N5SOF 366-8639 Treas: David Gates, N5LCL 392-5677 Sec: Gary Skaggs, WB5ULK 799-5363 Editor: Gary, WB5ULK & Ken Brown, N5KUK
<b>3. Mid-Oklahoma Repeater, Inc.</b> Meets: 1st Tuesday, 7:00 P.M., Favorite's Cafe 36th & S. Western, OKC Pres: Scott Walsh, N5NYS 787-3804 VP: Larry Benedict, N5VYC 728-7824 Sec: Tim Hanna, N5USM 842-3812 Treas: Robert Moose, N5QKI 720-0073 Editor: Dean Ward, N0PAD 681-4606	<b>10. Oklahoma DX Association</b> Meets: Qtly - Hamfests, DX Net Sat.1600UTC, 7.195 MHz, Box 88, Wellston, 74881 Pres: George W. Adkins, AD1S, Wellston VP: Darrell Reed, KF5DA Sec: Paul Harrop, WB5NDN Treas: Paul Wardell, N5PYD Editor: George W. Adkins, AD1S 356-4101	<b>16. Edmond AR Club</b> Meets: 7:00 P.M. Second Monday, Various Locations Pres: Mark Northcutt, WD5DYI 755-4672 VP: Wendell Cochran, WB5ISO 943-4308 Sec/Tr: Kay Northcutt, WD5DYI 755-4672 Trustee: Dennis Orcutt, WB5ISN 340-0034
<b>4. OK City Autopatch</b> Meets: 7:30 P.M. Third Tuesday, Salvation Army N.W. 50th & Penn. PR: John Guida, NJ1V 340-6518 VP: Chuck Wilhite, K5NK 721-4926 Sec: John Brassfield, N5SAM 685-8070 Treas: Mike Begley, N5VIT 732-2827 Editor: Chuck Wilhite, K5NK 721-4926	<b>11. Edmond AR Society</b> Meets: Odd months, 3rd Sun., 2:00 P.M. Edmond EOC; Dinner Even Months, 3rd Friday Pres: Ken Stepp, N5DBM 341-4874 VP: Terry Tiller, KB5RQT 373-4141 Sec: Lynice Hamlin, KB5FOH 427-2828 Treas: Ed Granger, KB5DZU 348-3454 Editor: Bob Long, N5KUE 373-2540	<b>18. Great Plains ARC</b> Meets: 2:15 P.M. First Sunday, Home of N5LRR 2914 Osage Dr, Woodward Pres: Bob Bayles, WB0GAX, Wdwd 254-3561 VP: Andy Taylor, N5LRR, Wdwd 256-4017 Sec/Tr: Rod Ford, WB5OVT, Gage 923-7683 TR: Freida Patterson, N5BOX, Wdwd 256-2111 Editor: Phillip Perry, N5QCN 938-2453
<b>6. Altus Association</b> Meets: 7:30 P.M. Second Thursday North Main Fire Station (CD), Altus Pres: Jim Romines, K15YY VP: None Sec/Tr: Bob Heron, KE4BN Editor: Jim Romines, K15YY	<b>12. Oklahoma Packet Radio Assn.</b> Meets: At Major hamfests, Green Country, Ham Holiday and Texoma Pres: Hank Blackstock, WA5JRH 722-0640 VP: Sec/Tr: Editor: Hank Blackstock, WA5JRH 722-0640	<b>Central Okla Radio Amateurs</b> Meets: 7:30 P.M. 4th Tuesday, Salvation Army, Penn. and NW Highway, OKC (back door) Pres: Frank Tassone, AA5GI 341-1124 VP: Kathy DeGraffenreid, AA5RU Sec: Jim Buswell, N5BEQ Treas: Tom Mangham, K5LDI 677-5291 Editor: Scott Walsh, N5NYS 787-3804

19 AUGUST 93						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 Great Plains	2	3 MORI	4	5 Aero Center	6	7
8 Wheat straw	9 EARC	10 76'ers	11	12 Altus Cimmaron	13	14 SCARS
15	16	17 OCAPA	18	19	20 EARS	21 VHF Club Sat. VE Tst
22	23 VE Tst	24 CORA	25 C&E Edit	26	27	28
29	30	31	1	2 Aero Center		