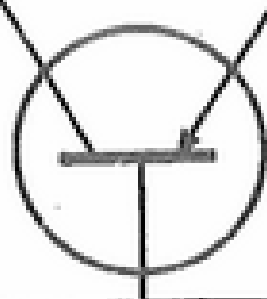


CENTRAL OKLAHOMA RADIO AMATEURS COLLECTOR AND EMITTER



50¢

VOLUME 9

OCTOBER 1983

NUMBER 105

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Well, the election is over and attendance at the CORA meetings should pick up dramatically. There were 13 representatives (that is from a total of 52 who were eligible) present but they elected a full slate of officers:

For president they elected REGGY WHITED.
For VP they re-elected MAC MACDONALD.
JIM BUSWELL was re-elected as secretary.
LINDA CALLISON was elected Treasurer.

Now that looks like a pretty good slate, it seems that Reggy has been making the meetings for a long time, always had something to say and was always in on everything that happened. We wish him luck, but it will require the help of a lot of people to make his term successful so it is up to the membership now for no one can go it alone although there have been some who tried. So let's all, and I mean all, get behind him and give him a shove. Will it be backwards or forward?

Now for Linda, she is going to need some help and I expect she will get it from George Maschino. This is a sort of thankless job. Lots of work that no one ever hears about, except at Ham Holiday time when there are countless bills to pay, but I bet that she can handle it.

As for Mac and Jim they were re-elected because they did a good job, and you can't do anything but reward them by giving them another term.

As for Jim and George, well three years is enough and one hard year as president seems to be about all a man can stand.

There were a few other things taken up at the meeting:

EARS is now a paid up member of CORA.

Don volunteered ACARC for facilities at the next Ham Holiday. Still looking for better facilities. Got any suggestions?

Mac volunteered to handle the commercial exhibitors and awards.

Meetings will be at the Fire Dept. until further notice. That's at 800 N Portland.

HAM OF THE YEAR award, to be presented to the amateur radio operator who has done the most for amateur radio was announced for the Autopatch Club. Winner doesn't have to be a member of Autopatch to collect the award.

That's all folks.

HAM HOLIDAY '83, ETC.

Talking to persons who did and those who did not attend Ham Holiday '83 suggests that HH may have departed from its original purpose.

And what was that purpose? Well, it provided a Radio Amateur a chance to give himself and his family a bit of a vacation that had appeal to the whole group. The Radio Amateur brought his family to a motel, checked in, got settled, and the whole family started a pleasurable weekend.

The kids had a swimming pool and other play facilities. The YF could take the family car and go shopping or exploring the sights of OKC. The OH could attend technical sessions or just mingle with others of kindred bent and shoot the breeze, making new friends and renewing old friendships.

But somehow or another, HH shifted. Now the OH drives into OKC and hunts a motel. He leaves his family stranded there while he drives to "The Cow Barn" and parks his car in their Extortion Center (also known as a parking garage). If he wants to slip out at noon to take his family to a choice place to dine (and there're many around OKC but none near The Cow Barn) he has to ransom his car from the Extortion Center. Should his YF desire the family car for shopping or sightseeing, she'd have to maroon her OH at The Cow Barn.....a horrible fate.

Now, consider the OH, plodding along on concrete floors, thinking of former days, when a friend would have spotted him and said, "Hey, let's slip off to my room and have a wee drink while your feet are recovering." Alas! That room is three miles away!

But The Cow Barn has one thing in its favor! It is very convenient for commercial exhibitors to bring in and to display their wares.

Balance against that the lack of banquet facilities. Of course, if the attendance at the '83 banquet is indicative of a trend, any MacDonald's should be able to accommodate the crowd. Now, if MacDonald's just had room for exhibitors.....

Seriously, don't you really think it's time to revert to the original concept of a holiday? Give it a bit of thought.

W5JJ

RADIATION HAZARD?

In Part 2 of its series on "How Dangerous is RF Radiation," Amateur Radio concludes with this statement, "There is no case for introducing any special regulations, on any amateur band, aimed at controlling RF hazards due to amateur radio."

An article on building a 13.8-V power supply tells how to salvage an old TV power transformer for easy rewinding to the needed voltage.



Club
NEWS

W1407
The New South Wales
Radio

Minutes of September Meeting

Meeting was called to order at 10:05 A.M. by President Paul, WA5HTL, with eight members and guests present. Ellard, W5KE, gave the treasurer's report. Our account has been moved to Sooner Federal Savings and Loan, which has agreed to service it without charge.

Bob, WA5HXL, Ellard, W5KE, and Paul, WA5HTL, were selected as CORA representatives for the coming year. At the October meeting we may select an additional representative to serve as alternate.

Jim, N5BEQ, 1. Presented the Secretary with an assortment of birthday gifts which were circulated for the group's amusement, 2. Appealed for some help on siren test coverage; and, 3. Brought the ARRL video tape, "Amateur Radio's Newest Frontier" for our enjoyment. Meeting adjourned at 10:35 so the video tape could be watched. Joe, K5JB, Sec'y

Pi Net Calculations...Another BASIC Program

As soon as the last C&E hit the streets, I got another BASIC program in the mail from Frank, WB5ZOE, who obtained it from Elmer Wingfield, W5FD, in Little Rock. I called him to discuss it and he hit on a dandy idea which I am passing along in case someone has more time to pursue it than I.

The little Hewlett-Packard and TI calculators have a built-in function that converts polar to rectangular coordinates and back. This feature is useful for calculating reactive networks. While working with series circuits, it is convenient to think in terms of impedance (resistance plus reactance). When a shunt circuit component is encountered, it is easier to work with admittance (conductance plus susceptance). All you have to do to convert from one to the other is take the reciprocal, right? The rub is that it is difficult to do in rectangular coordinates. (That is where all the hairy equations come from.) It is not so difficult if you hit one button and convert to polar coordinates, where you have a magnitude and an angle. The angle doesn't change from impedance to admittance so all you have to do is take the reciprocal of the magnitude and use the single key-stroke to convert it back into rectangular coordinates. How about someone writing the BASIC program with the sub-routines to do this conversion. It would be a good illustration of how simple network calculations can be if the mathematic language is simplified.

This Pi Net program is not too prompting so you have to understand what it does. R1 and R2 are end conditions one desires to match and they are in Ohms (non-complex values). Q0 is the overall Q of the circuit. The point W5FD was making in his August QST article was that the various handbook assumptions of Pi network Q have been wrong all these years, but close enough when large impedance ratios are being matched. His technique is more accurate when the impedances are close such is the case with solid state equipment or vacuum tube cathode matching networks. (And all this time I thought we guessed at Q to resolve equation indeterminance, the specific value being trivial.)

The program is in Microsoft BASIC so it should run on most machines. Change the dialect where necessary and you have a handy-dandy Pi network solver. My preference, as long as a computer is involved, is to let it go ahead and solve for the inductance (or even wire size, coil diameter and

number of turns) and capacitance values. Or even better, let it solve for a whole range of values and see if it finds values to match your junkbox. (This is what I call creeping elegance.) Remember, a computer is best when it is doing a task that requires a large number of operations. If it is only going to do it once, it is quicker to use pencil and paper. Joe, K5JB

```
100 ' PI-NET4A
102 ' REV. 7/15/83 EAW
104 '
110 ' Q BASED FORMULAS PER W5FD FOR
112 ' CALCULATING PI-NETWORK REACTANCE VALUES
114 ' SEE AUG 1983 QST...THIS VERS IS DE-BUGGED
116 '
120 CLEAR
130 INPUT "R1";R1
140 INPUT "R2";R2
150 INPUT "Q0";Q0
160 IF R1 <=0 OR R2 <=0 OR Q0 <=0 THEN 170
    ELSE 180
170 PRINT:PRINT "INVALID NEGATIVE OR ZERO
    INPUT": GOTO 360
180 PRINT
190 ' SPECIAL CASE WHERE R1=R2
200 IF R1=R2 THEN X1=(2*R1)/Q0:X2=(2*R2)/Q0:
    Q1=Q0/2:XL=(R1*Q0)/(Q1*Q1+1):GOTO 300
210 IF ABS((Q0*Q0+1)-(R1/R2))<.01 THEN PRINT
    "L NETWORK":GOTO 360
220 IF ABS((Q0*Q0+1)-(R2/R1))<.01 THEN PRINT
    "L NETWORK":GOTO 360
230 IF R1/R2>Q0*Q0+1 THEN PRINT "NO SOLUTION"
    :GOTO 360
240 IF R2/R1>Q0*Q0+1 THEN PRINT "NO SOLUTION"
    :GOTO 360
250 Q1=(R1*Q0 - SQR(R1*R2*(Q0*Q0 - (R1-R2)*
    (R1-R2))))/(R1-R2)
260 Q2=Q0-Q1
270 X1=R1/Q1
280 X2=R2/Q2
290 XL=(R1*Q0)/(Q1*Q1+1)
300 PRINT "R1 = ";R1
310 PRINT "R2 = ";R2
320 PRINT "Q0 = ";Q0
330 PRINT "X1 = ";X1
340 PRINT "X2 = ";X2
350 PRINT "XL = ";XL
360 PRINT:RUN
```

Gaithersburg...Another Hamfest

I had the good luck to be in Washington D.C. over the weekend of the Gaithersburg Hamfest this month. As I has been my habit, I prevailed on the hospitality of Hoss, WA5ZAI, during my visit and stayed over after close of business Friday night. In spite of our late return Saturday night from a clam fest, Sunday morning's wee hours found us winding our way toward the fairgrounds at Gaithersburg. Hoss advised me the hamfest would have 15,000 visitors so we wanted an early arrival before all the goodies were gone.

The talk-in frequency was buzzing with activity as we arrived at the site and, sure enough, there were some fools who got up earlier than we. "Tailgating" is the term used in that area for the flea market and already the trading was well under way. We immediately set out to make the first pass enroute to the indoor dealer displays and prize ticket drum.

The dealer display was pretty decent. All the current 'gee whiz' rigs were on display and the crowd was curious enough to keep the dealers busy. My only purchase was an Icom BP-3 battery pack and charger for \$12.00.

As you would expect at a fairground, things were a bit spread out but it didn't take long to find the items Hoss needed, a duplexer and a Z-80 CPU card for his Apple computer. A lot of quality things caught my eye but if I couldn't stuff them in my pocket, I let them lie since I was scheduled to catch a commercial flight later that afternoon and like to travel light.

(I wonder what might be busted in Houston during the ARRL conv. Oct 7-9?) Joe, K5JB

THESE CORA MEMBER CLUBS PROMOTE AMATEUR RADIO

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

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

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

4 OKLAHOMA CITY AUTOPATCH ASSOCIATION
MEETS: 7:30pm Third Tuesday. Okla City Fire Training Center. 800 N Portland
 PR WD5FKF Reuben Castleberry 691-1070
 VP WB5NDO Kathy Whited 799-1457
 SE N5DLM Vickie Adkins 722-6795
 TR KE5M Ron Recer 341-7030
 EDITOR: Kathy Whited WB5NDO 799-1457

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

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

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

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

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

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

14 CIMMARON AMATEUR RADIO ASSOCIATION
MEETS: 7:00pm Second and Fourth Mondays. Place varies. See club section.
 PR KI5P Major Bailey 227-2061
 VP WB5ECM Dennis Painton 764-3599
 S/T N5FMH Nadine Painton 764-3599
 EDITOR: Jack Day, N5FMQ

15 SOUTH CANADIAN AMATEUR RADIO SOCIETY
MEETS: 9:30am Second Saturday. Red Cross Bldg., North OU Campus. Norman
 PR K5KDR Bill Oliver 329-6333
 VP KA5MIZ Bob Rabin 360-6996
 SE KA5EFJ Ken Neptune 321-7789
 TR WD5GTC Gene Johnson 321-6759
 EDITOR: Sam Barrett, WA5RPP 321-2601

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

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

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

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

CENTRAL OKLAHOMA RADIO AMATEURS, Inc.
MEETS: 7:30pm Fourth Tuesday. OKC Fire Training Center. 800 N Portland
 PR WD5JNT Ted Vanlaningham 262-1675
 VP K2GKK D. C. Macdnald 672-4947
 SE N5BEQ Jim Buswell 236-0368
 TR K5GGL George Maschino 263-7614

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 Joe Harding, WA5ZNF, 737-1044

CIRCULATION MANAGER:
 Bob Graham, WB5NSV, 677-8685

kay

COUNTY ARC

From the desk of the President and the minutes of the Kay County Amateur Radio Club, the meeting was called to order by WB5YRN Delbert. The minutes of the last meeting were read by KA5PUB Glen and approved by membership. The financial report was given. A report was given by W5ZWM C. L. about the servicing of club repeater equipment. There was a discussion about the range of the repeater, and the problems should be resolved with the servicing of the equipment. A report was also given by W5ZWM C. L. about the status of the phone patch decoder access equipment that was being designed. A motion was made by WB5SAG Grady for W5ZWM C. L. to research commercially built equipment specifications for availability and, with the approval of the repeater committee, purchase the equipment for the club. Comments were made about the high telephone rates. WB5SAG Grady gave a short summary of the business arrangement made with the telephone company concerning our club telephone line and the rates that will be charged. Comments were also expressed about the possibility of a simplex site set-up for specifically phone patch use by the club.

A discussion was also held about the use of RITTY on the club repeater. It was the consensus of the membership that RITTY not be used on the club repeater for three reasons: (1) Emergencies; RITTY transmissions usually last about 10 minutes with no way to break in. (2) Noise; unintelligible sounds without specific equipment that are annoying. (3) Simplex frequencies or another repeater can be set up just for RITTY use.

W5ZWM C. L. made comments about the upcoming joint civil defense RACES and Civil Air Patrol exercise to be held this month. He hoped that the club would participate in this.

W5ZWM also brought up the subject of the annual SET (simulated emergency test) operations next month. He stated that since he would be unavailable next month, his assistant N5ANV Vern would handle the club operation.

The subject of the ARRL club affiliation was brought up for discussion. The advantages were stated and talked about. The club then directed that a person-to-person membership roll be made.

An announcement was made concerning the club's annual Christmas dinner to be held on December 13, Tuesday night, instead of the regular club meeting night. More information concerning this will be made at a later date.

We are also happy to have N5GIW Louis (formerly KA5-ILZ) back out of the hospital.

WA5UBO Marsh made a report on the condition of the club's emergency operating truck. The engine has been tuned up and is now running real good and starting everytime. The operating booths have been built and installed. The Ponca City Civil Defense director has acquired 3 public service radios to be installed in the truck. The truck has yet to be painted, but this will be done in the near future. Progress is slow due to the hot weather but should be faster with cooler weather here now. Meeting adjourned.

73's
Delbert WB5YRN

Medium size antenna sale! Hygain Thunderbird Junior, \$50; Hygain 2 meter fiberglass colinear, \$15; Alliance U-100 reconditioned, \$10; RCA Co-pilot converted 10 meter SSB, \$90. Tom, WA9AFM/5. After 7 pm, 737-6716 or 734-5496 during day.

FOR SALE: Heathkit HW101 SSB transceiver (brand new, assembled but never used) \$399.95. SA-2040 antenna tuner (assembled) \$179.95. HM-2140 VSWR bridge meter, \$89.95. HP-23C AC power supply \$64.95. ALL THE ABOVE HAS BEEN ASSEMBLED BUT NEVER USED. B&W #595 ANTENNA selection switch, Astatic T-UG8 mike & stand. Name your price on last two items. FREE to whoever buys me out. 691-1574 after 9pm.

THE BIG SIGNAL
OKLAHOMA CITY AUTOPATCH
ASSOCIATION, INC.



Well, here I am sitting at the typewriter and my mind's a blank. What do I say? Is the paper in right or will it be crooked? I have never had to write an article for the C & E before and I am terrible at writing letters. Reggy is watching the Dallas Cowboys and someone play football and is no help at all. He was a lot of help last Friday, telling everyone I was another year older, (how embarrassing) but then again the Cowboys weren't playing ball.

NOVICE CLASS: Jack Stewart, N5FZK, will begin a Novice class, October 6, 1983. The class will be held on Thursday nights at 7:00 pm, at the Southern Oaks Recreation Center, SW 67th & S. Walker. If you know someone interested in taking this class have them get in contact with Jack at 634-7583 (home) or 733-2813 (office).

Tuesday's meeting was a training session on the operation of the emergency trailer. Although it was a little chilly we had a good turnout. The Saturday before we had a complete training session, from taking the trailer out of the pound (storage area), to setting it up and taking it down. I was surprised at how easy the trailer is to set up. A lot of thought went into building a trailer that Vickie, N5DLM and I could do the complete set up and take down procedures by ourselves, if need be. Thanks again to those who donated their time, effort and material into making the trailer a success. If you have any suggestions on usage of the trailer get in touch with Dennis, WD5CSM, or Frank, N5FM.

What would you, as a member of OCAPA, like to do, see, hear or have this year? Do you have a certain speaker you would like to hear? A particular film you would like to see? How about a Christmas party, a bowling party or a picnic? The list can go on and on. Suggestions, ideas and help would be appreciated. Bring it up at a meeting or get in contact with the program chairman.

Our new Membership Chairman is Jack, N5FZK. We encourage all members to come to the meeting and bring a friend. Get involved and support your club. We need all the help we can get.

The October program will be a film on "Amateur Radio's Newest Frontier", re: Owen Garriott, W5LFL, an Enid native and NASA Shuttle Specialist Astronaut, will attempt to operate 2M FM from STS-9, scheduled to launch 1030 CDT, 28 Oct.

The October meeting will be a Very Important Meeting! Some changes and decisions to be made. The direction this Club is to follow for the next year may well be determined by this upcoming meeting. DO YOU CARE???? If so, SEE YOU THERE!!!!

Throughout the year there will be typographical errors, misspelled words, misplaced or left out punctuation marks, if you feel the need to correct these errors, please take the copy you are reading and stick it.....in your typewriter and correct away.

73's

Kathy, WB5NDO

P.S. Does anyone know where a person could get a well trained Bassett Hound? Has to be named Duke.

NOTICE: Joe Geoffry of Merit software, 3701 NW 50th, is having a diskette of the month program. Drop by once a month a get a FREE diskette. He also carries Rainbow magazines.

* FOR SALE *
* TWO SHUGART 400L DISK DRIVES *
* SINGLE SIDED, 40 TRACKS WITH *
* CABINET AND POWER SUPPLY AND *
* CABLE. READY TO RUN ON COCO. *
* CALL -- DEAN AKIN SHAWNEE *
* (405) 275- 5908 *

OK DX

De AD1S.

TWO MEETINGS IN OCTOBER! H44SH SPECIAL GUEST OCTOBER 27

The OK DX Association will meet twice in October and everyone is invited to attend. Our regular meeting will be on the usual second Monday, October 10, 1983 at the FRED GANG'S RESTAURANT, located on N.W. 39th Street between Meridian and MacArthur. The gathering starts as early as 6:00 and breaks up in time for Monday Night Football!

OUR SPECIAL MEETING, featuring DXer and champion Contester H44SH, will be held on THURSDAY, OCTOBER 27, 1983 also at Fred Gang's Restaurant. When you come into the restaurant, just ask for the "DX Group" and the hostess will point out the direction.

Stuart, H44SH (also G6VUO) will be in Oklahoma City for a few days prior to his departure for the Pacific, and we would like to show him some ole fashioned Okie hospitality. So come on out and join in the fun on October 27.

There is alot of Dxcitement coming up in October and early November, so lets get to it:

ON THE BANDS

BY - CHINA is finally going to come up on SSB for all the QLF crowd... You should have two opportunities; First, listen for BY1PK on 14.145 whenever there is propagation to Asia. Tom, VE7BC, who was so instrumental in getting amateur radio operation renewed in the People's Republic of China has been granted permission to operate SSB beginning as early as October 4, 1983. Tom will listen between 14.180 and 14.220 Mhz. BY1PK has a new station up and operational with a 3KW amplifier and a TH7DX antenna. We should be able to hear them!

The second chance for a SSB contact will follow on or after October 12, 1983 when a group of Japanese operators will operate from BY4AA. This one will be a little tougher, since it is not likely that the JA operators will concentrate on North America, nor is the new BY4 station as sophisticated as BY1PK.

ZA - ALBANIA is still being rumoured, with German and Finnish operations possible in early October. Martii, OH2BH was in Albania last Summer and presented the Albanian Sports Federation with a transceiver, so it is hoped that some interest in amateur radio will evolve. Now you know as much as I do...

HK0 - MALPELO ISLAND is expected to appear on or before October 12, 1983. The Radio Club of Colombia is making an all-out effort to fulfill everybody's needs for this rare one. Assuming the expedition enjoys an uneventful landing, contacts with Malpelo should be like shooting fish in a barrel. Listen the usual DX frequencies and send only ONE QSL with each envelope and IRCs. The callsign will be HK0TU.

CONTESTS- DO NOT overlook the BIG CQ Worldwide DX Contest (SSB) during the weekend of October 29-30, 1983! This is the premier DX test, and unless you are

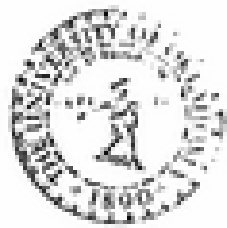
nearing the honor roll, there is a good chance you will hear a new one on during this weekend. Exchange signal report and your CQ Zone.

Another interesting contest is the VK/ZL OCEANIA contest which is held on the weekends of October 1-2, 1983 (SSB) and October 8-9, 1983 (CW). This contest generates alot of stir in the Pacific, and you might expect to hear the VK9's, VK0's and other interesting stuff.

FINAL REPORT on the "LOCAL DXPEDITION"-- In about thirty days AD1S/KH5 should be a reality. Over a year of planning and nearly a hundred letters later, we obtained permission to land on Jarvis Island National Wildlife Refuge with a team of five amateur radio operators, a U.S. government biologist and the owner of our chartered sailboat "Farouche". It is no coincidence that the sloop captain was drawn with interest to our expedition, since the captain's name is Derek Jarvis (!). The operators will be an experienced lot...Stu Greene, WA2MOE was on Desecheo, Navassa and Peter and Paul Rocks; Stu Honeysett, H44SH is an outstanding contester and internationally-known DXer; Burt Myers, M.D. is remembered for his operations from VP2E and ZK1; John Getz, AD8J was operator of the record-breaking VP2E contest effort in 1982; and then there is AD1S...("Why is HE going???" asks N5DLM)

In any case, we will be looking for Oklahoma stations and a friendly voice. Landing on Jarvis is expected on November 5 with operation to continue until November 10, 1983. Operation will be on 10-160 meters, with CW 25khz up from band edge LISTENING UP. SSB operation can be expected on 3.795, 7.090, 14.195, 21.295 and 28.595 Mhz all listening UP. Good DX! De AD1S.

I HEARD: CSM's night in the barrel is on Thursday....
....YAQ can't read a note of music but if he can find the right note he can harmonize.....NWX shaved his beard so his customers wouldn't know him.....IH was stopped by a Smokie for going to slow on the H. E. Bailey.....FLO forgot his trousers.....VVZ gets awfully moody at times.....GOM hah hah hah hah I don't know hah hah hah.....FM is an authority on trucks.....BQX has shorter legs than most of his passengers.....OZE is looking for a good looking insurance woman.....YIZ won't talk about GKK unless he knows he is listening.....FEX lost his flutter.....DLM describing how much she loves her pooch.....NZS's middle name is Lucky.....BJS changed her call to a WA5.....NDO got a case of giggles in bed.....GL usually takes up at least two parking spaces at Roy Rogers.....FKE is the c.w. instructor for the new novice class.....FZK is responsible for M and FKE.....NWX and DLM had a date on the motorcycle trails.....SJV wasn't supposed to be doing that.....NZS wouldn't mind going to the dentist if they were good-looking women.. DLM loves the sight of blood.....GOM haw haw haw haw well I don't know haw haw haw haw.....SJV learned what the "A" button is for.....NWX won't comment on that.....1S feeling no pain.....TAN is always behind.....GKK went more bananas than he thought.....SJV surrounding a hot one.....NZS's xyl runs the show.....GOM he he haw haw he yea I know he haw he haw.....and a lot more.....K5NK



The
University of Oklahoma

POLICE DEPARTMENT
2720 Monitor
Norman, Oklahoma 73019
(405) 325-2884

September 7, 1983

Mr. Ken Neptune
South Canadian Amateur Radio Society
180 West Brooks
Norman, Oklahoma 73019

Dear Ken:

The Great Oklahoma Balloon Race and Air Show was a great success! The show attracted approximately 50,000 spectators in and around the airport. We were treated to a spectacular show never before seen in Norman--52 hot air balloons, 75 aircraft on display, a three hour air show plus military fly overs--truly a formidable undertaking by the Themis Foundation to raise money for charity.

I would like to thank you for your invaluable contribution to the Balloon Race and Air Show. The able assistance of you and your staff enabled us to provide for the welfare and safety of the spectators during the event. Please convey my thanks, and the thanks of my staff, to those who worked with us this weekend.

The Themis Foundation is in the initial planning stages for a similar show next year. We, and they, learned much from this experience and will use that knowledge to our advantage next year.

Again, thanks for making this event a reality.

Sincerely,

William T. Jones

William T. Jones
Chief of Security

The South Canadian Amateur Radio Society

SCARS.....

Well, the Great Balloon Race is over and was apparently a success. SCARS members turned out to provide communications for the event, and were very well received. Many comments were made by various persons involved in the air show regarding the good work done by the members of SCARS and those who helped us. The following letter was also received.



GEORGE NIGH
Governor

OKLAHOMA CIVIL DEFENSE

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405/521-2481

September 20, 1983



NORRIS PRICE
State Director

"RACES"

"Severe flooding was occurring in the northeast section of Oklahoma" on Saturday, September 17, 1983. That was the theme of a disaster training exercise according to Norris Price, Director of the Oklahoma Civil Defense Agency.

The exercise involved three organizations, the Oklahoma Civil Defense Agency, the Civil Air Patrol and "RACES" an organized group of 286 amateur radio operators sponsored by Civil Defense.

Twenty-two missions were flown by CAP. The aircraft were launched from Frank Phillips Airport in Bartlesville, Oklahoma, to overfly hypothetical situations and land at 13 airports in northeast Oklahoma, Price said.

"RACES" members received the report from the Civil Air Patrol pilots and relayed the information using amateur radio to the Oklahoma State Emergency Operations Center in the Capitol Complex, according to Price.

Price stated that this type of training helps to sharpen the skills of emergency groups to render aid to victims.

The Oklahoma Civil Defense Agency prepared the exercise as part of its role as the coordinating agency.

A total of 36 "RACES" members participated in the exercise. The Agency extends sincere appreciation to "RACES".

WB52KZ - Jack

OKIE DIRT

RIDERS ARE HAVING THEIR ANNUAL ENDURO SUNDAY, OCTOBER 23, AT THE DRAPER LAKE RIDING AREA. HAMS WHO CAN OPERATE 2-METER MOBILE ARE NEEDED AS CHECKPOINT COMMUNICATORS. THIS IS A NATIONAL POINTS 80-MILE EVENT. CALL DON, K5SJV, 721-2119, TO GET IN ON THE ACTION.

GET TO KNOW YOUR FELLOW MEMBERS

It has come to the attention of the writer that some of the more recent members of OCAPA would like to become better acquainted with other members of the club. After giving this some serious thought, I deemed it necessary to perhaps start a column for the C & E entitled "Get to Know Your Fellow Members". How often this column stays in print will depend on how long the writer remains in good health after the first edition.

One of the first problems facing the writer was trying to figure out who the initial celebrity should be. We are fortunate to have many interesting characters for members, so the decision was most difficult. But, one of the most interesting characters of the club has to be Mac, K2GKK/5, so it was decided to pick on him, excuse me, start with him and go down hill from there.

The second problem was pinning down the character for a good interview. However, after several regular club meetings, this was accomplished through deceit on the part of the writer at various after meeting meetings.

To his close associates, Mac is known as Don or Donald. Others know him as Bugcatcher and at times his disposition lives up to the phonetics he uses for his call, Great King Kong.

Mac is interested in all phases of Amateur Radio. His first love has to be County Hunting in the cw portion of the bands. He has developed a knack of being able to short two pieces of wire together and using this as a keyer has built up a code speed of nearly 7½ w.p.m.

Mac loves mobile operation, either on his motorcycle or in his smartly polished Mustang. Two of his favorite subjects to discuss while mobiling around are the many chugholes he is able to find in the Oklahoma City streets and the inability of fellow drivers to meet his requirements of proper driving techniques. He is often heard describing other drivers with everything but kindness. Some descriptions couldn't be printed.

Mac is an avid home-brewer. In addition to dandelion wine, he has constructed such items as spools to roll up short pieces of wire and telescoping long-nosed pliers.

For years now, Mac has been attending school to develop the ability to talk fast. Primarily, he has been practicing on his call sign. He has seriously considered trying out for making commercials for Federal Express and he could probably get the job.

Mac recently retired from the Air Force. He was well on his way to becoming a six-star general, but one day he didn't salute a private. After being called on the carpet for this act of disrespect, he was told that he would have to crawl around in the nose of an airplane all day working on radios. As his friends know, none of his military carried over into civilian life.

During his military days, Mac was able to travel all over the world. He spent several tours of duty in the Sahara Desert and developed a sincere liking of camels. To this day, he is probably one of the better known authorities on camels and a majority of the good jokes he tells pertain to camels.

Mac is known as one of the better dancing hams in the Oklahoma City area, especially at Ham Holiday banquets. He is light on his feet and usually after a couple of belts he can be seen doing everything from two-steps to polkas. All the women adore him.

Get to know Mac. He is a fun-loving, easy going fellow who seldom loses his temper. Being a quiet type of individual, he seldom voices his opinion and only then if you don't ask for it. You'll love him.

K5NK

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EVERYBODY NEEDS A "BIG KAHUNA"

Hey, I'm just like all the other repeater jocks in town. You got to have a "System." And it can't be any system, it's got to at least talk as far as it can hear. Now, granted, this is a change in philosophy for the old 88 system in Norman. For many years, I just wanted a repeater that just worked. And work it did. The records for the Norman repeater are a little scarce, but my best recollections are that I put it on the air back in 1971 or 72. It was just going to be a small repeater working off the Engineering Center on the campus. It was one of the first four systems to go up in OKC area. The frequency was actually a secondary frequency used by the 146.22/82 repeater group and they graciously allowed us to move it from OKC to Norman.

It all started with a small 2 watt transmitter on the Engineering Center in Norman, Oklahoma (Somehow, this line rings with similarity to Ted Baxter's 5000 watt radio station in Fresno, California, a \$200 a week paycheck, and a crazy dream . . .) I never intended to get coverage past Moore in the northerly direction and Purcell toward the south. The first repeater worked with a donated Motorola receiver and a VHF Engineering transmitter strip located about 200 feet from each other on the Engineering. We eventually were able to put up a J pole type antenna on one side and used a ringo on the other. There were no duplexers, just two antennas and some quad ivory phone wire between them. It worked surprisingly well for just being your basic lashup. There really wasn't anything there that any manufacturer of alligator clips would not have been proud to sport. Power was eventually boosted to about 10 watts or so and it ran at that power level at 100 feet or so up until WB5ISN dropped an extra power supply and transmitter strip that he had knocking around. With the antenna gain, the power ERP went up to about 80 watts. Eventually, through upgrades and modifications and a nifty amount of finagling, we eventually moved the receiver to the Physical Sciences Building on the west side of the Campus. Another J Pole was placed on the building and eventually was replaced by a DB264. Now, I had to rent a phone line between the two buildings to separate the transmitter and receiver and receiver coverage jumped considerably since it about doubled in height and the better antenna. Transmitter power left a little to be desired on the output side of the repeater. It is probably true that this might have been part of the problem with the repeater. People who interfere with your repeater from out of town could have two problems. First, they can't hear your repeater, thereby they do not know that they are "backshotting" the input. Second, they can hear your repeater leading to the inevitable kerchunking and attempts to "DX" the repeater. So, it is basically a circumstance where you can get tattooed no matter which way you went. I tried to be nice about it and run a reasonable amount of power to achieve suitable coverage area. We just put up with the "Buckshotting" ragchewers and "DX" hounds. It was especially a problem with anyone who was trying to use the patch.

During all of this time, I had an idea of upgrading the controller on the repeater a little as you go. The first system had timeout timers and crude on/off control which eventually grew to manufacture of my own PC cards with IDer, ID Control, Timeout timer, Function cards, and my complete four board Touchtone decoder cards which made use of and

tamed the ubiquitous and finicky NE567 Phase Lock Loop. This board surrounded the 567 with all the necessary circuitry that made it work from the AGC-Prefilter card to the missing pulse detectors and Power line filters to prevent the Local Oscillator from exiting the chips via the power source. This set of 8 cards comprising two complete sets of decoders probably cost a couple of hundred dollars or so to build. Although it was designed in 1975 or so, it worked almost perfectly for over 8 years. Next to the monolithic decoders for touchtone, it is an electrical dinosaur. Stuff was still pretty reliable.

When microprocessors came into vogue, I thought that this would be a perfect project to add to the controller. I began to collect information and details about such controller. During the next several years, this project progressed slowly. I came up with a CPU card, a Phone interface card a touchtone decoder, and a monolithic touchtone decoder. I still lacked an audio card and software development. I was not worried about the latter, since WA5JXX had offered a few programming tricks and finally offered to volunteer. Not to worry, since Roger spins 8085 code in the machine language form like Rapunzel spins straw into gold. Time became the most crucial enemy. Since the early days, just finding time to go over and fix a broken repeater was hard to arrange. A lot of these sessions began on various casual basis. The cost/Benefit ratio if very low was or could have been very low in trying to arrange suitable times for servicing equipment or "fixing it."

Since the idea of microprocessor controlled repeater was a little novel (actually the idea of using a microprocessor to control a repeater is older than the idea of a regular repeater, but only by a few drops. I thought about saving some money by looking at some of the commercial controller manufacturers. Some of these were impressive, but "what the box did" just wasn't all that spectacular in comparison to the price. I decided to keep looking.

Lightning finally struck a little over a year ago in Dayton (Where else?) I noticed in the brochure that they announced a meeting regarding a "Fifth Generation Repeater Controller." I decided to violate one of my basic safety rules and sneak in under the roof. It featured Ed Inger of Advanced Computer Controls and an apparent controller build on a single board.

Ed's present was nothing short of fantastic and the demonstration of the controller showed that it was a simple box. Nevertheless, Stan WB5UIY and I came back and drummed up a little business. This was a microprocessor that was simplicity itself. Stan and I both listened to almost all of the sessions and didn't come to the conclusion that we should sit still about it. Au contraire, we spent some time later on, soaping the windows, to try to convince those who might have opposed the purchase that it was an interesting opportunity to upgrade a machine for the Edmond Club.

When it came in, Dennis promptly set to install it. The design was simplicity itself and featured voice synthesis, remote base links, and a whole host of other "pretty snazzy gifts." The design was designed for maximum flexibility with the emphasis on software and a minimum of hardware. What hardware there was well designed and mil spec manufacture. The firmware was designed for the hostile user environment with several techniques designed to minimize interference from "nuts" and squirrels who can't resist the opportunity to play with a sophisticated machine.

In fact, the installation of the controller on the repeater preceded the beginning of a bunch of unidentified transmissions and touchtone transmissions by less than a day. Try as they might, the kerchunkers were not able to unlock a single function.

I still wanted to work up a couple of cards for a controller for 88, but time was getting the best of me. I got several of the cards up and running, but there was still a lot of work to be done. It just seemed to be easier to just get an RC - 850 for the repeater and be done with it. This became especially true after I acquired a Motorola upright repeater base station capable of Big Kahuna power and got it running. I also had to listen to chides from WA5TOO as to when I was going to drag this repeater and its duplexer to the top of the Physical Sciences Building on the University and install it. The RC-850 still looked like the best solution. I finally got around to ordering it in June and got a delivery date quoted of 6-8 weeks. I spent some of that waiting time planning the installation and checking out the Motorola Repeater. When the controller came in, activities went to double time for awhile. The main problem was finding a suitable method to interface it to the repeater. WA5TOO and N5AMV were big helps in this department with their advanced knowledge of repeater. After a couple of huddles, we were able to get an installation that allowed maximum versatility. We order some pins from Motorola that allowed us to take connectors in the modular construction and use them for audio out from the repeater and audio back in. We also used a similar technique for the PTT connection back in. COS (Carrier Operated Switch) was simplified a little by the fact that I just extracted discriminator audio and ran it into the Micor Squelch card that I had been working on. After a couple of false starts and a little of modification, it worked well just like a Micor should and allowed us to set the squelch to just virtually any quality or level of signal.

One of the most important part of the installations was to permit the repeater to operate in some fashion without the controller installed. After a lot of soldering and drilling in close quarters, I was able to reduce it all to a single switch in the control shelf which would allow me to just switch the repeater back and forth from the controller to just plain vanilla operation with just a minimum of problems and a flick of the switch. It was at this point that I was able to make an A/B comparison of the enhanced and compressed audio of the controller versus the normal straight through audio. The controller offers a slight amount of compression for just a little added "punch" of the audio signal. It also boosts low level signals just a little to beef up radios that are just a little thin. Nothing about this is overdone, however, and by the use of a little sophisticated design, Ed was able to avoid the "pumping" sound of some compression techniques frequently heard on the HF band and occasionally on the VHF and UHF bands. A minor problem with the COS was rapidly solved after a trip through the Micor Card with a scope. The discriminator audio of the Upright base was just a little heavy for the Micor card and had to be knocked down a bit. After a couple of small fires were put out, Darrell said, let's go put it up and I couldn't think of a good reason not to, so we loaded it up in Dean's truck and with help from KA5OHU, and WA5TOO, KA5OHU and Dean back at the shop checking the service monitor, it went up the stairs after an elevator ride to the 11th floor. The last two floors was quite a ride and quite frankly, I was glad that Louis KD5WA was around. He handled the dolly quite well, but it still took several us to help move almost 500 pounds of repeater cabinet and repeater. Most of the weight seemed to be centered in the outdoor cabinet that the radio came in, but I was glad

that I had it since the cabinet was to be located in an elevator room with the usual carbon dust and other hostile elements. The machine was originally installed with a couple of holes in the cabinet from somebody who decided that this environmentally sealed cabinet needed some ventilation to make sure that it got plenty of air in the dusty shop where it was installed. It also got plenty of dust and I had spent quite a bit of time sealing up the various holes in the cabinet with plates and gaskets. I still have to be very grateful to the fellow who sold me the system, because his only comment after "as is" was just be sure you use it.

After the loading process, the truck ride, unloading, the elevator ride and the trip up two flights of stairs, the repeater, not surprisingly, had to be retuned. Darrell noticed a slight instability in the exciter, but after connection to the Duplexer and the antenna, power came up to normal. Receiver sensitivity seemed improved and range of course, was consistent with increase in transmitter power and height.

A couple of instabilities have cropped up and Darrell and I spent another weekend working over a 10 meter installation, but for right now the system seems to be working fine. The instability in the exciter was solved after it produced a ton of garbage that began to eat up a number of repeaters in the area. That took an extra afternoon which may be documented elsewhere in this issue because the problem and the solution both appeared nonodvious and odvious respectively. Power dropped once after the exciter output tube crapped out and had to be replaced one night, but otherwise, the growing pains are close to being over. Now, it is just a matter of adding the appropriate interfaces to bring more of the sophisticated functions on line.

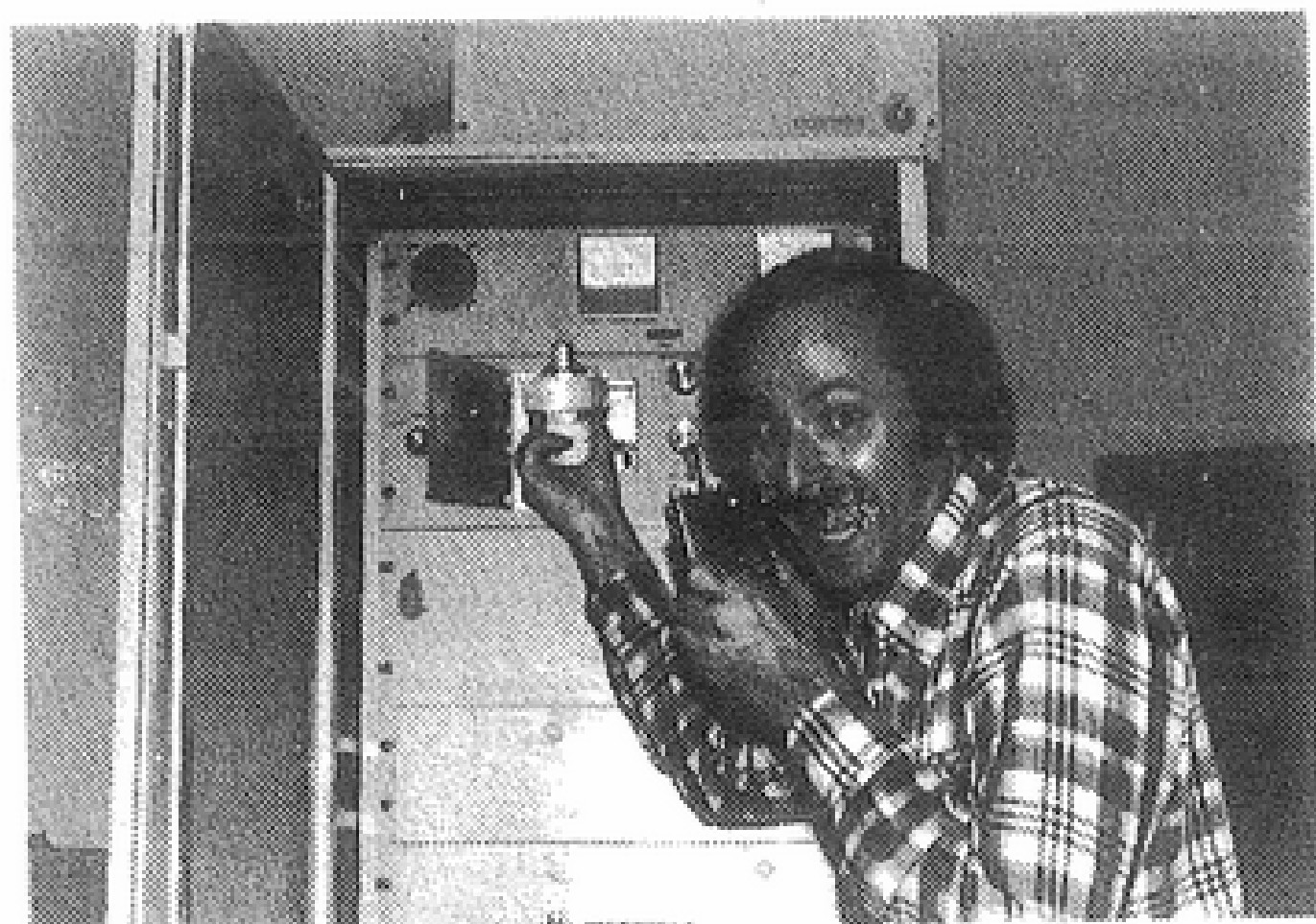
As always, there are a bunch of users who help make something like this more fun. I mean, you have to have somebody to talk to and there were any number of people who wanted to help physically, fiscally, and intellectually. Sometime this month, W5UXR hopes to complete a user's manual for the supporting users to explain the various functions available. It is not easy to interface to a repeater that gives you a little of "electronic lip." WD5HPU is arranging for duplication and assisting in the editing process.

Perhaps one of the bigger novelties has been the ability to use the voice synthesizer to announce the scores of the OU Football games. This, of course, does not apply to losing efforts like the Ohio State game. The vocabulary is limited and sometime it is a challenge to come up with appropriate phrases that people recognize.

There are a few problems still to work out. For instance, what am I going to do with all the cards that I built up for a microprocessor controller. Well, the answer to that is to install them on the UHF control link. This is a project that is still on down the line. There are other things to be done. Probably need to check through the instruction manual to see what can be done if the tube gets a little soft. When the exciter output tube failed the other day, this left the Class C power amplifier without drive. Not too healthy for any tube. The output is an 8650 conduction cooled tube similar to the 4CX250B but without radiating fins and cooling circuitry. It connects through a heat sink to a large radiating finned surface. The final loaf along at rated power. In fact, both Dean and Darrel suggested that the power amplifier should have the pants driven off of it to keep the tube emission up. Well, that's life with a "Big Kahuna."

Micheal Salem N5MS

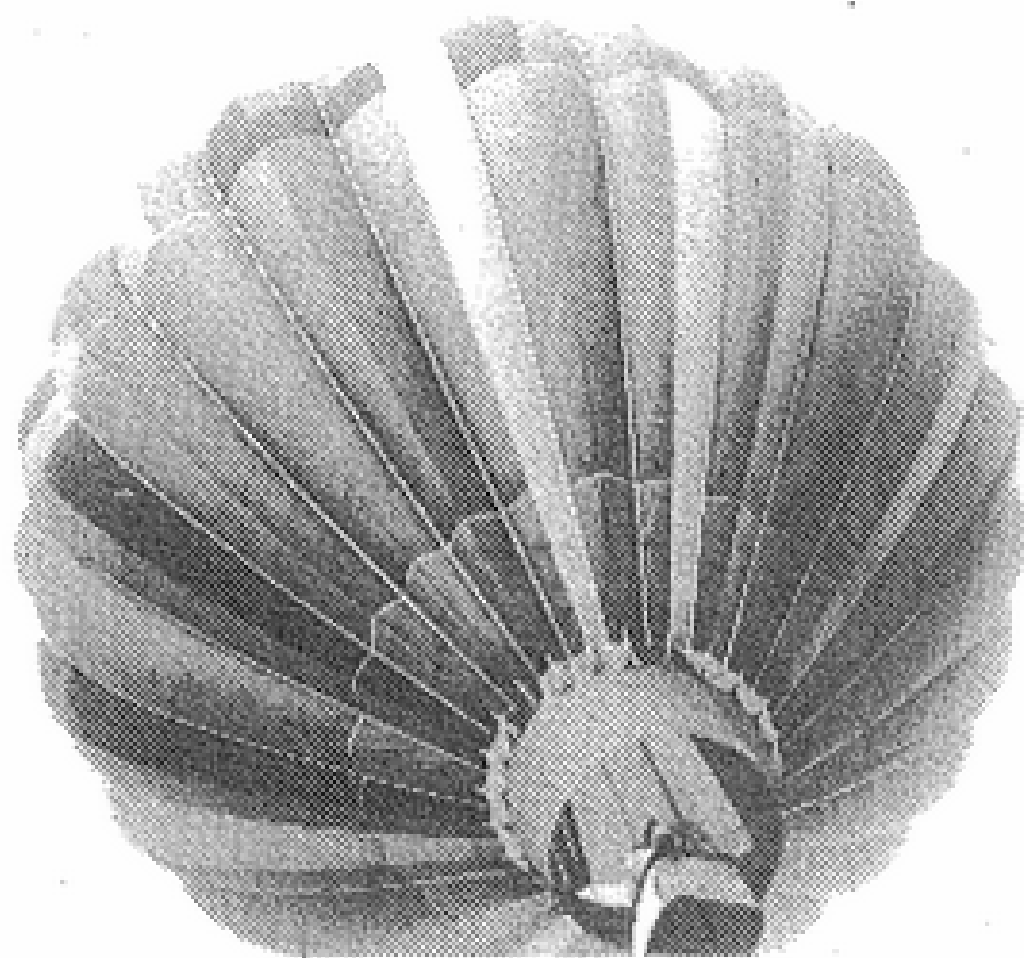
BIG KAHUNA PICTURES



IN THE LIFE WITH THE BIG KAHUNA, Mad Mike poses with the retrofitted Motorola Upright Base Station which features a newly installed 4CX1000A driver. Minature radio is by Motorola as is the special base station. Please note the wild eyed expression characteristic of over exposure to high intensity VHF and UHF fields for prolonged periods of time. Special hair do is actually a radiating heat sink for heat dissipation after RF deposition. Radio is actually new special Hershey Bar newly minted by the famous Chocolate Company in (where else) Hershey, Pennsylvania to honor the installation of the Big Kahuna in Norman. N5MS is getting ready to take out the first bite at dedication ceremony of Big Kahuna Exciter.



DEAN AND DARRELL (New Musical Group) pose with Big Kahuna Power Amplifier which is actually Motorola Upright Base station retrofitted to accomodate two 4CX1000 final amplifiers. It is rumored that users will be able to drive a small car in the vicinity of the Physical Sciences Building from the energy received from a single quarter wave antenna. Cars equipped with small beams will be able to drive to the city limits. Club is currently negotiating a contract with the Good Humor Company to power their ice cream trucks in the Norman area. Tinker Air Force Base has petitioned the FAA to designate the Physical Sciences Building as a critical location for testing of heat seeking missles. Russian approval is expected momentarily.



SPECIAL HEAT DISSIPATING Hood fitted over Big Kahuna Power Amplifier is designed to collect excessive heat generated by transmissions of KA5OHU in QSO with W5OU and convert to peacetime use in lifting Hot Air Balloon. Balloon is special design that travels to greater height in proportion to BS factor which is particular for each user. Above mentioned conversation between W5OU and KA5OHU sent special balloon to stratospheric record much to dismay of Canadian mouse pilot. On the other hand, conversation between N5MS and WA5JXX had balloon collapsing in gasps on ground. Adjusted BS factor in the negative accounted for aborted operation. W5OU graciously volunteered for further experiments with special heat seeking balloon every fourth year as appropriate depending upon whether or not there would be a runoff election.

Photography by N5MS
Half-Tones (We couldn't afford full-tones)
by WD5HPU.

For those of you actually interested enough to read the fine print, the Big Kahuna actually consists of a Motorola J73MPY-1100AT Upright Station with no moving parts including fans located in an outdoor Motorola cabinet. It is capable of a minimum of 120 watts output and the final amplifier is a single conduction-cooled 8650. The repeater is single sited on the Physical Sciences Building on the

Campus of the University of Oklahoma. The antenna is a DB Products DB264 with a center of radiation at 200 feet. The duplexer is a close space Phelps Dodge Model 497-509 and the antenna is fed with about a 70 foot run of half-inch Andrews LDF Cable. Effective Radiated Power is approximately 400 watts. A DB low band trombone type antenna tuned for 29.6 Mhz has been installed alongside the VHF antenna for the 10 meter link.

Micheal Salem N5MS

TROUBLESHOOTER'S TEXTBOOK

Big Kahuna Division

In the process of wiring in the ACC RC-850 controller in the "Big Kahuna" repeater, WA5TOO and myself encountered a rather strange problem that I thought that would be worth mentioning. Not that it will be something that any of you gentle readers might encounter, but rather that it might help to show you when a ground is not a ground.

The problem seemed to be a simple instability in the exciter stage and one that I had a good deal of trouble isolating. The Upright Station was designed so that any RF active devices were in shielded rack-mounted cabinets. These cabinets opened from the front and drop down for easy servicing.

Anytime you buy used equipment, the buyer must beware, (not that you are going to get stuck, for this instance, I considered the base station a genuine find and I was quite grateful to my benefactor for selling it to me) but in finding out why the station was taken out of service in the first place. The radio had been heavily modified by the drilling of various holes to allow audio from the speaker to the outside of the cabinet and to pull a microphone to the outside. Obviously, somebody wanted to use this radio as a base station in an unsealed condition. I thought that the problem was simply just a lot of dirt had crept into the radio and broke something. Well, this was not exactly the case. I broke down the entire system and visited the local car wash with the cabinet. WA5TOO and I brought it back and dried it out, then washed off all the equipment with naphtha. Another drying session and we were ready to reinstall the equipment, plug in the crystals and see if it would work. Well, it did, and after retuning the duplexer, I found that the station as it was would do the rated power with one interlock tied behind its back. After letting it cook for awhile, I pushed it back in the corner to scratch my head for a little while over a minor desense problem and see what could be done about sealing all the holes.

The solution to both of these problems came from N5AMV and WA5TOO. Dean provided some gasket material to seal the holes and both suggested that the desense problem might be conquered by using some super flexible 1/4 inch LDF cable inside the cabinet. I made up a set of cables at a cost of about \$50.00 or so and it really seemed to knock down the desense. It was about this time that I noticed a crazy type of instability in the Exciter. The radio would tune up OK when the shelf was down, but when I tried to close it, the readings would go all to hell and the repeater would generate a little bit of noise and desense. We tried to stabilize it by retuning and eventually was able to get it to stop, but it seemed to be quite touchy.

I thought that perhaps the problem was related to the fact that there were two frequency splits for the radio, one above 151 Mhz and one below 151 Mhz. My radio was, of course, the high split. After a suggestion by WA5TOO, I ordered all the parts to low split the radio. This included several coils and a handful of capacitors. After installation, the radio seemed to be a little more stable. We installed the exciter back in the radio and hauled it up to the site.

A week or so after installation, I was listening on Sunday morning and I heard the repeater go beserk. After a little listening around, I found that it was generating garbage all up and down the band. I brought it down with the control link and WA5TOO called and suggested that we run over and check it out. Of course, when we got there, the radio was perfectly tame. It was at this time that I found that

one of the coils had broken loose where I had glued it in and was turning in a semifree mode. This coil had been a problem tuning up and I had made a notation in the log that it didn't seem to be responding. This was further confirmed when I removed the shield and found that the coil had broken away from the PC card. I ran home and got some epoxy and cleverly resecured it with a five minute dab. I then rewired the coil. The radio was still a little unstable and the coil would not tune. It was at this time that I noticed that a capacitor C12, which formed a resonant circuit with L1 and the varactor diode made a ground connection through the coil shield. I made sure that I had resoldered the shield so that the capacitor would have a ground return. A portion of the circuit card is shown below:

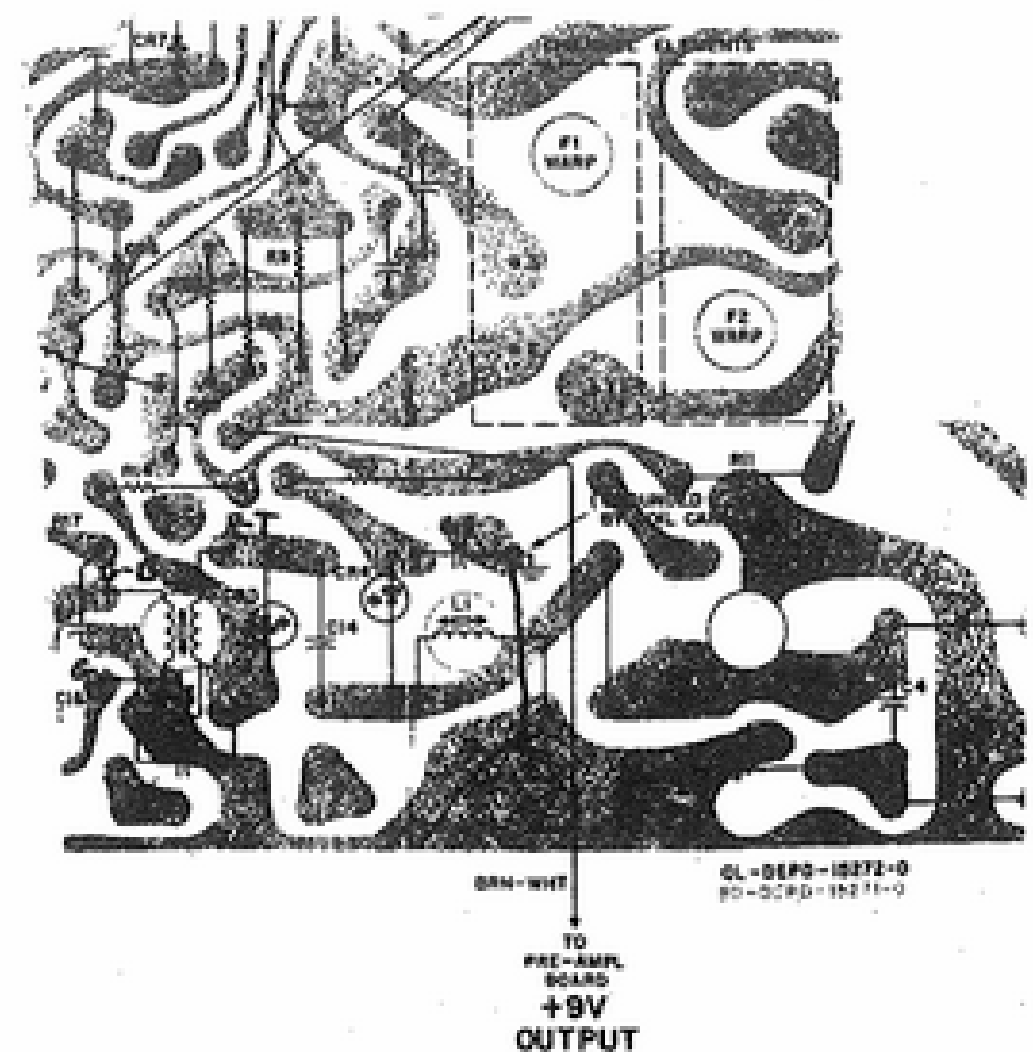


Figure 1. Portion of Exciter from Motorola Base Station detailing ground return for C12 through shield of L1 Shield Can. Shield was found to have from 24 to 7 ohms to ground which created instability in exciter.

I looked at the shield and it appeared to be steel plated aluminum so that the solder would stick to the shield can. I measured with an ohmmeter to make sure that the solder connection was good. It measured almost 20 ohms! After getting down on it good with a soldering iron, I remeasured and found that I could not get it lower than 7 ohms! I finally ran a jumper from the bottom of C12 to the ground connection shown on the bottom. At this point, the instability went away and the coil tuned perfectly. No problems appeared since then and I have checked the meter readings since then with no problems.

The problem is actually a design defect. Motorola should probably not have used the coil shield as a ground return in this instance, although this is frequently done. The problem is actually the material that is used for the coil shield. It was apparently not designed to be removed and installed a couple of times. Of course, Motorola might not have anticipated that I would downband the radio. So maybe, it is not actually their fault.

What the circuit was actually seeing was the shield acting as a type of choke. The DC resistance was probably upsetting the Q of the circuit and making the coil tune rather broad banded or not at all. Again, this is a difficult problem that might not have been entirely obvious and considering that if I had not checked the connection with an ohmmeter, it might not have been found at all. In any case, we are not eating up the entire 147 Mhz segment and the amplifier seems to be working OK.

Micheal Salem N5MS

Club Officers

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

Meeting Place

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

Meeting was called to order a little late, at 9:20am, by president Bob Langmacher. 63 people present.

COCO

SEPT. Minutes

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Some possible programs for future meetings are OS9, FLEX and special application projects. Mr. Lacost was not present so the program for next month has not been confirmed as yet. Until informed otherwise it's still the accounting package of Jim Lacost for OCT..

Hardware: Two problems this month.

One -- Bob Langmacher was having trouble with a Surgert disk drive. A small ball bearing in the head drive system was coming out of its track. A small amount of lubrication solved the problem and the drive has been working just fine for several weeks now. A note of warning here, lubrication of any kind on the head or belts of the drive will cause you T-R-O-U-B-L-E.

TWO -- DMP 400 and 120 printers are having some trouble with the directory print programs. It seems the trouble is in the old ROMs, if you have a program call NEWROM then all is well. Newrom makes a patch to the old ROM to make it in reality ECB 1.1.

CATALOG/2DR -- catalogs diskettes on two drive

CATALOG/1dr -- " " " one "

These programs were written for our club by Lewis Sample from Mustang. Lewis was at the meeting and told us a little about the development and growth over the past year of these programs. I will put these on the tape for next month and with a little luck the instructions in the C&E. CATALOG will catalog disk or cassettes BUT your must have a disk drive to run it. AS far as I know this is the only program that will catalog over 1000 PROGRAMS.

The door Prize drawing was extra nice this month because Frank Fields donated his back issues of Color Computer News and we also had another power strip. The big Winner was Harry Schoenhals.

Herb Reed asked for information on a Data Communication terminal printer, and Bill Holland needs to see a manual for a Hayse Smart Modem.

The meeting was turned over to Bob Langmacher and Bill Wright for the Program on HOMEBASE. All I can say is "HOMEBASE is QUIET a program". Great job fellows.

Motion to adjourn was made and seconded at 11:32

CIMARRON A.R.A.

EDITOR: Jack Day, N5FMQ

It was a long summer, and a very short Fall. Are we really going from hot summer into freezing temps? The thermometer did not register a freeze but the sensitive plants such as sweet potato and Periwinkle certainly did.

Even the low bands are getting better! Forty and Eighty meters cleared up as soon as the rains came. Cara has been slightly disorganized ever since the Field Day Binge That took a lot out of all of us. Still, in retrospect, the group has stayed pretty active.

Seventeen members and family attended the Ham Fest in OC. Thirteen attended the WheatStraw Meeting at Canton Lake. The Thursday CARA Two Meter Net has operated on a regular basis. The Novice Class did graduate two new Novice Class Members.

Perhaps the greatest effort since the Field Day, however, was the booth that CARA had at the Major County Fair. We maintained a fully equipped Ham Station for three days and evenings at the Fair, operating an Icom 730 on HF with a trapped verticle...a two meter display with both Hand helds and base; and a Computer programmed to read the incoming CW and RTTY on a screen. Members doing duty at the booth was Major Bailey, KI5P, Dede Bailey N5FUN, Nadine Painton N5FMH, Jack Day KD5YB, Betty Day N5RTW, Denny Painton WB5ECM, Fred Simpson N5FUO, Ruth Simpson N5FUR and Leo Peil KA5DUO.

In addition, KI5P is a regular on the OK Phone Emergency Net and the Ok Tfc & Wx Net, KD5YB works the Sunday RACES & Ok Baptist Emergency Net, WB5ECM works in the NW OK SVC Net, WD5GUG is a regular on the RACES Net, KC5OU is a regular on the OK TFC Net and the SW TFC Net and WA5OUB gets into the OK TFC Net pretty often.

Yessir...Ham Radio is alive and well in this area!

KI5P has another of his famous circuits for you Major....

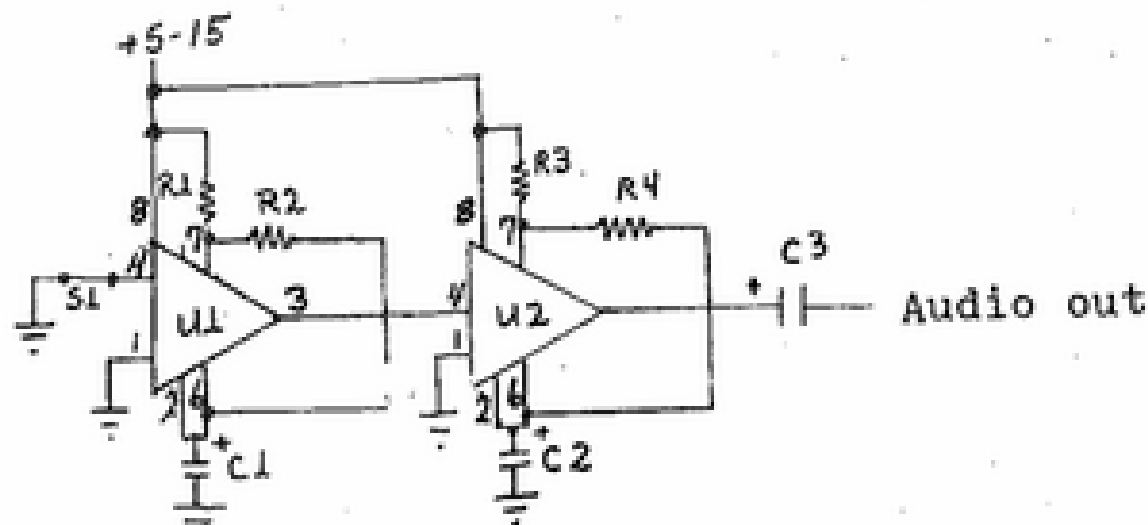
AN AUDIBLE OVERHEAT INDICATOR CIRCUIT

The following circuit is not only easy to construct, but can really save lots of bucks on very expensive repair bills. The circuit consists of two pulse generators and a thermal switch.

Circuit operation is as follows; Thermal switch S1 (normally closed) holds the reset of U1 low, preventing oscillation. When the switch opens due to an overheat condition, U1 begins to oscillate at the rate of about 1 hertz. When U1's output is high, the reset of U2 is enabled. U2 is an audio frequency oscillator. The output of U2 can be used to drive an 8 ohm speaker directly or may be connected to an audio amplifier for higher output.

The result is a pleasant "beep beep beep" from the speaker indicating that something is getting just a little bit too warm! This circuit can be used on power supplies, amps etc.

KI5P



U1-U2; NE555. R1; 47K. R2; 220K; R3; 3K
R4; 3K, C1; 15 Uf Tantalum. C2; .1 Uf Tantalum
C3; 10 Uf, S1: Normally closed thermal (150-180)

EDMOND AMATEUR RADIO SOCIETY 147.72/147.12

Since this is a new column in the C&E let me take some space to introduce the Edmond Amateur Radio Society Inc. otherwise known as "EARS".

This amateur club was officially incorporated in 1957 as a non-profit organization. The reason for the incorporation was primarily to protect the members from lawsuits in case someone got hurt while participating in standard club activities; such as erecting and climbing antenna towers or trying to start a generator. (I can personally attest to the pain the generator could generate if you didn't crank it right!!)

EARS has seen alot of changes over the years. A newspaper in the 1950's featured a picture of club member Alan Watson, W5ERY, with a genuine, working T.V. set in his car. A recent edition of the Edmond Sun carried a picture of Ken Stepp, N5DBM, in the Edmond CD mobile communication van. Quite a difference in mobile equipment!! Earlier, most hams were chasing DX for a challenge. Now at the club meetings, you hear not only about DX, but also about computer programs to send CW and keep the station log, or about new features to be added to the repeater autodialer.

Even with the changes the club has seen, EARS itself has not changed. It is still a group of local hams who get involved in the community and enjoy tinkering with new gadgets or talking to new places on the air. Sharing these activities is what the EARS is about.

Here is a list of EARS activities:

(1) CORA: We are back in CORA and are proud to be part of this fine organization. It has done more to unite Okla. ham clubs than any other group. At the last EARS club meeting, our acceptance into CORA was announced and discussed. The discussion was one of both approval and support, as we look forward to working together with other ham clubs.

(2) CIVIL DEFENSE: EARS has been active with the Edmond CD for several years now. Our main function has been with the tornado watch program and monthly siren tests. EARS now has a radio room in the new EOC, but more about that later.

(3) COMMUNITY SERVICE: In addition to work with the CD, the club also provides communication during local parades and at the Special Olympics held at CSU each year.

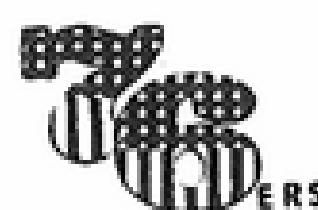
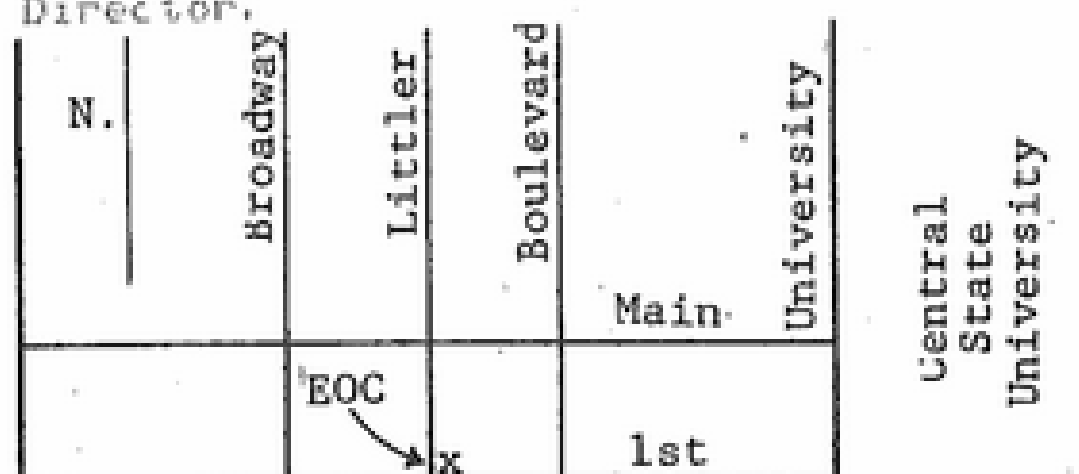
(4) AMATEUR TRAINING: Classes are held when a group is found expressing an interest in amateur radio. We try to tailor the class to the needs of the group.

(5) CLUB MEETINGS: EARS has a business meeting one month and a dinner meeting the next. This stresses being a hobby club and involves each member's family.

This list summarizes where EARS is now. The future for EARS and other ham clubs is as bright as the future of Ham Radio itself. An insight of tomorrow's

Ham Radio is visible in an ARRL film titled "Space--Amateur Radio's Newest Frontier". Jim Buswell, N5BEQ, came to the September club meeting and showed the film. It was about Ham Radio on the next Space Shuttle mission and it gave the feeling of Mom, Apple Pie, and Ham radio. It was a very good film and Jim is due a hearty Thank You for taking the time to bring it.

Before I time out my audience, I will announce the October club meeting. It will be on Friday, October 21 at 6:30 P.M. in the new EOC building. This building was originally the old Edmond Post Office, located on the corner of First and Littler streets. (see attached map) A dinner meeting is scheduled and there is a kitchen there. Please call Penny Starr at 341-4874 a week or so before the meeting so we don't all bring the same thing. The meeting promises to be a special one as we will get a tour of the facilities by David VanNostrand, Edmond Civil Defense Director.



BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

MINUTES OF SEPTEMBER MEETING

Meeting called to order by the VP, Ted Vanlaningham, WD5JNT due to the absence of our president.

SECRETARY REPORT: Since August was our annual Ice cream supper there were no minutes. (Besides the Secretary was out of the state.)

TREASURER REPORT: Tom Webb reports he has finally gotten the books straightened out and has disposed of lots of unnecessary stuff in the files, such as old paid receipts, etc. The current balance in the treasury is \$408.25. Current membership is 57 but some are unpaid and will be dropped this month if not renewed. The treasury is split between the club fund and repeater fund, there is approximately \$120.00 in the club and \$180.00 in the repeater fund.

OLD BUSINESS: No old business was reported.

NEW BUSINESS: CORA elections are coming up and we need to be there to make sure our club is represented and our voice is heard.

REPEATER REPORT: Dick reports that Dennis, KA5GTM has donated an antenna of unknown resonance but we know it is not two meters. It may be in the 155 Mhz range but it may be possible to trade it to someone for some two meter gear. A repeater technical committee was formed to expedite the finishing of the control circuits. They have decided to meet at least twice a month until the project gets back on track. The meetings will be held at Dick Bakers home at the Granada mobile home village at 2400 S McArthur on Sundays. Get on .76 and get time and directions.

After a short break we had the program for the night. The first program was a video tape of our Field Day held in June.

The second program was a video tape about Astronaut Owen Garriot, W5LFL who is going to be taking a two meter talkie into outer space with him in October and will be making some real DX contacts back to earth.

Both programs were very interesting and those of you who aren't making it out to meetings should try to make it out in October, because it will be our yearly election of officers.

OCTOBER ELECTION - BE THERE !! N5AUH, JERRY

Q. R. Zedd

SIGNALS HEARD FROM ZEDD PARTY AT LAST!

TOKYO (C&E News Service) -- Weak but fast CW signals signing A5A/XV were heard in Japan and China during the second week of September, raising hopes for the long-lost DXpedition into Vietnam that was led by the world's greatest DXer, Oklahoma's own Q. R. Zedd.

The CW station was dishing out contacts far too fast for anyone to get any information from it on fate of the expedition, which also included Zedd's momma, Constance Wilhelmina Zedd, Ohio's Bill Buckeye, famed Russian DXer Boris Badenov, and Bill Blast, American honor roll member who usually hosts the Blast Off DX Net from his megawatt station in the Pacific northwest.

The Zedd party was invited to open XV to the world back in June, causing a stampede of operators that terminated Zedd's wedding to Tondelayo Schwartz, blonde, nubile, 20-year-old QSL secretary, before Rev. Billy Graham could pronounce the vows. Since then, the expedition went to Vietnam, where members were wined and dined on Proletarian Potluck dinners, featuring gartersnake and ancient Twinkies, washed down with liberal quantities of fake Russian Budweiser, and then entered the Vietnamese jungle to begin operations.

Alas, a border incident involving three or four neighbors and their respective armies obliterated the DX camp site, and since then nothing has been heard from the Zedd group.

TIME magazine has already run Zedd's obituary, misspelling his name. As a result of this error, 7.1 million readers cancelled their subscriptions in September and the magazine went bankrupt.

The signals coming faintly from the jungles somewhere near Vietnam's border with Cambodia were terminated after about seven days and nothing has been heard since.

Among the transmissions monitored on high-speed recording tape were the following:

"W5OU 599 599 K"

"A51PN QRX W5NUT 599 599 KN"

"QRZ DE A5A/XV K"

"U5 U5 K"

"QSL VIA CALLBOOK K"

"W2NSD/1 QSY QSY QRZ 5 ONLY K"

"W5UAW WE WORKED QSY QRZ 5 K"

Those who heard the signals said they had a chirpy quality and were not only weak, but susceptible to rapid QSB and flutter. Peter Drake, in Ohio, issued a statement that this was not the signal of a TR7, which the type of rig Zedd had strapped to his tee shirt with velcro tape when he was last seen stalking into the jungle. Drake speculated that the TR7 had been damaged or destroyed in jungle fighting, and Zedd's party was operating on some sort of jury-rigged rig.

There was jubilation and celebration worldwide, not to mention the firing-up of countless illegal linears, when Zedd's signals were first heard on the American west coast. However, the signals quickly faded and since that date nothing more has been heard. Renewed fighting along the Vietnam-Cambodia once more raised fears for the party's safety.

In Newington, Conn., headquarters of the American Radio Relay League, the DXCC desk announced that it might or might not accept cards from the Zedd expedition. It was explained that approval will depend on documentation submitted if and when the party ever gets back, and whether there was a CIA agent along, as there is supposed to be on most DXpeditions to sensitive areas of the world.

Meanwhile, also in Newington, the League's board of directors met to discuss

mounting a rescue operation in case Zedd and his friends are really in trouble. By a vote of 17-6, the board voted to take certain actions. The world waited with fishhooks in its mouth to learn whether the ARRL could be of value in the crisis, but minutes of the meeting were written by an old technical writer and have not yet been translated into any language anyone else can read, so details are sketchy at presstime.

Back home at Honor Roll Ranch, just a hoot and a holler south of Norman, Tondelayo put her trousseau in mothballs and did tower work. Her house guest, Natasha Bullwinkle, brunette, nubile, QSL aide from Box 88 for Boris Badenov, reportedly pleaded innocent in Cleveland County district court to a charge of sticking several people with her knife. Natasha first promised a reporter from the C&E an interview, according to stateside reports, but then changed her mind and stuck him with a knife, too.

At last word, N5MS was in good condition at Norman Municipal Hospital's new Natasha Bullwinkle Stab Wound Treatment Center, and was working at a bedside card table, trying to convert a 1939 Zenith floor model to two meters.

By month's end, the silence out of Vietnam's airwaves had once more grown worrisome. Helicopters combed the area where the last signals were thought to have stemmed. Flags were flown at halfmast at the world-famous Q.R. Zedd radio museum in Rome, and the Zedd chicken farm near Lexington was closed to the public.

Just at presstime, NEWSWEEK came out with its October 5 issue, featuring a picture of Zedd and his momma, and the headline, Can This be the End? Gloom deepened around the world.

-- KU5B



The 2nd Sunday this month dawned on the Wheat-straw territory a bit darker than usual. Among the preparations for the monthly club outing were heard a few comments wondering if it would be fit for a watermelon feed at the park in Weatherford. It seems that we all went anyway. On the way we did have to turn on the windshield wipers. It was coming down pretty hard when we arrived at the park, but Perry had a good waterproof shelter all waiting and ready. It had been so long since we had a good rain that a few of the younger ones wondered why the sky was dripping so, but it was dry under the shelter, though it was just a bit noisy with all the QRN on the tin roof. It rained right up until time for our meeting to start then Mother Nature turned off all the QRN and we had a nice meeting. Afterwards we saw a video film that was taken at our field-day site and another one that was on the Space Shuttle and the first ham in space and how he will conduct operations on the ham band during the upcoming trip into space. It was a very interesting tape.

Then it was time to dig into the melons. I had my order in for a yellow meated one, and Virginia had an order in to have her name on one. I had all the yellow mellon I could eat and sure enough, carved into one of the melons as big as you could ask was VIRGINIA. I hope she had help eating it because it was big enough that I don't think she could have handled it all alone.

Next month the meeting is going to be at the Beaver Hamfest, so it looks like the club is still going strong on outings. It should be a good trip.

See you on 01-61 Wed night

k5gg1

MEETING - TUESDAY, OCTOBER, 11th

1334 S. Jenkins, Room 119
Wilson Activity Center

The Fall semester is well underway at OU and the OU Amateur Radio Club has been busy. There's a new repeater on campus with better coverage of the area than the old one, and a fancy new controller package that allows the repeater to bill itself as 'the complete automatic machine'. This new repeater operates on our old frequency of 146.28/88 MHz. Listen in the next time your tuning the two meter band.

For the fourth time in the past two years the OU ARC has been present for nationally sanctioned bicycle races in Norman. Sunday, September 11th was the second annual Kelly Cup Criterium sponsored by Kelly's Fine Food and Drink in downtown Norman. A criterium is a set of races consisting of many laps around a small course. The Kelly's Cup course was only 0.8 miles in length, even though some races were 20 miles long. The folks at the criterium asked us to assist Buchanan Bicycles with their Fall Foilage Tour, a 62 mile ride scheduled for October 16th. We will have hams in mobile units providing communications on 2 meters for the event. Any one interested in helping should contact me or Pete, KA5COI or drop by the October club meeting.

A reminder to all members and potential members: Dues are 'due' for all members at the beginning of the fall semester; contact Jim Greenshields, for the yellow slips you must sign in order to receive the Collector & Smitter.

September Minutes

ACARC

The September meeting of the ACARC was called to order at 8:00 PM Friday, September 2nd by K5LDI. Introductions were held for the 44 members and guests present.

Don Rooker K5SJV gave the CORA report and read a letter of appreciation from CORA to the ACARC for our club's participation in Ham Holiday 83.

After a bit of discussion, we jumped right into new business where Don Rooker K5SJV Jim Jones K5PER and Charlie Greene WA5JGU were appointed CORA representatives for the upcoming year.

A motion was made and carried that our club would take care of facilities at next year's Ham Holiday.

At 8:25 the meeting was turned over to Roland Clark of International Crystal, who gave an excellent presentation on the manufacturing of radio crystals. I'd like to thank Ed Murta K5LIL, for engaging Roland to give us a presentation.

After Roland finished, Ron StLaurent ND5S ran a videotape concerning Amateur Radio in Space and the upcoming flight of the Columbia with W5LFL aboard. Thanks Ron.

At 9:50 the meeting was adjourned for doughnuts, coffee, and talk.

John KA5JGX

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HAM HAPPENINGS REFER TO CLUB SECTION FOR SPECIFICS

REFER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
OCTOBER						COCO SIREN WATCH 341.94
		MORI Great Plains	ARDMORE	EDMOND Club	Aeronautical Center ARC	SCARS
2	3	4	5	6	7	8
Wheatstraw	OK-DX	76'ers SHAWNEE		ALTUS AREA		VHF Club SIREN WATCH 341.94
9	10	11	12	13	14	15
	A.R.E.S.	AUTOPATCH		KAY County	EARS	
16	17	18	19	20	21	22
23 OKIE DIRT RIDERS PAGE	24 CIMARRON EDIT GENERAL CHAIRMAN RICH ARNOLD COLLECTOR - EDITOR	SHAWNEE CORA				
30	31	25	26	27	28	29



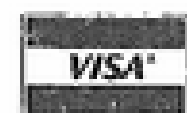
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