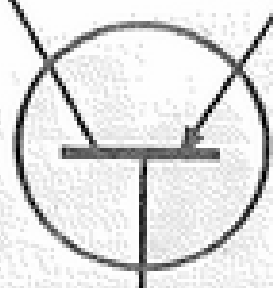


# CENTRAL OKLAHOMA RADIO AMATEUR COLLECTOR AND EMITTER



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Volume 7

NOVEMBER 1981

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## PLANS FANTASTIC DX-PEDITION

As the DX world already knows, Oklahoma's own Q.R. Zedd, the world's greatest and most lovable Dxer, has announced plans for his latest expedition, this to Mt. Williams.

Zedd is keeping some details of his planned operation, such as the dates, a secret. He says those who want to work him badly enough will find him. The occasion of his mammoth press conference to announce the outlines of the expedition allowed a reporter for the C&E to secure an interview with him. Following is the transcript of that interview.

C&E -- Mr. Zedd --

Zedd -- Just call me QR, boy. Don't be formal. I mean, I know you're only a crummy WB and I am the greatest, but this is a democracy, right? Relax. Get off your knees; you're not supposed to shine alligator cowboy boots anyway.

C&E -- Mr. QR, the DX world is fascinated to know where this mysterious Mount Williams is. Can you tell us?

Zedd -- Why, sure, boy, be glad to. Shucks, no secret about that. Mt. Williams is that pile of dirt down there near Norman, on the North Campus, that the Navy boys used to shoot bullets into. Some people still call it Bullet Hill, matter of fact. It's the dirt pile by the airport that folks are always chalking messages on, and there's usually a cow on top, or a dead one at the bottom where she just took a nasty fall.

C&E -- Are we to understand, then, Mr. QR, that your latest and greatest DXpedition is going to be from the North Campus in Norman?

Zedd -- That's what I just told you, boy. Are you deaf or just a little slow?

C&E -- Mr. QR, pardon me for asking, but why would a great Dxer such as yourself go to Mt. Williams when there are so many neat places to work from, like maybe Albania or St. Maarten?

Zedd -- Why hell, boy, EVERYBODY has worked Albania by now, ain't they? And ole Gillie Wood, he's done worked PJ8 plumb out. Nope, hardly nobody has worked Mt. Williams. I figure on making 25,000 QSOs from there, if my batteries hold out. The Japs will go crazy. I ought to get 6,000 IRCs out of it.

C&E -- May we assume you'll work both SSB and CW in the usual DX splits?

Zedd -- You can assume whatever you want, boy, but you'll probably be wrong. I plan to work mainly high-speed Charlie Whiskey, and don't look for me to have no master of ceremonies or list-taker, or to check into any nets or any of that crap. My motto is No lists, no lids, and I'll have my keyer memory set at 65 words a minute and two real neat code readers a-goin', and if you can't keep up, why, that's just tough beans.

C&E -- Mr. QR, will you make this expedition all alone?

Zedd -- Yep, except for my QSL secretary, Tondelayo.

C&E -- You speak of Tondelayo Schwartz, your nubile, blonde, 19-year-old QSL secretary of whom we have spoken in an earlier issue of our publication?

Zedd -- How many other Tondelayos do you know, boy?

C&E -- Mr. QR, while we have this brief moment to talk, could you tell me your opinion of why you are the world's greatest Dxer.

Zedd -- Why, I don't mind at all. It's very simple, really. It is all a matter of intelligence,

grace under pressure, establishing the proper scheme of lifetime priorities, good equipment, a smidgen of luck (Here Zedd blushed modestly), and a good brand of deodorant.

C&E -- Did you say --

Zedd -- Deodorant. I said deodorant. You know, a man can sweat a lot, chasing a rare one. I believe I can say without reservation that I owe a lot to my Right Guard. You know, I am the only amateur radio operator -- be sure you get that right, boy -- amateur radio operator -- when I hear somebody call us hams, why, my gallbladder gets so inflamed I think I am gonna blow up sometimes. But to get back to me being the only radio amateur ever to appear in a Right Guard commercial in Playboy Magazine --

C&E -- You spoke of priorities. What kind of priorities must a good Dxer establish?

Zedd -- You don't want to hear about my Right Guard?

C&E -- Sir, we would really rather hear --

Zedd -- Okay, okay. I catch your drift. Well. Priorities. In the first place, I think if you're gonna chase DX, then you better put DX on the TOP of your list of activities. You never know when you might miss one, off working at some stupid job or playing croquet or something. Get rich or retire. That's first. Then you don't let nothing else intrude into your listening. I listen HOURS for every minute I talk. Personally, I like to start listening on two or three bands about four o'clock in the ayem, and I listen to about nine. Then I let Tondelayo listen for me while I go eat the breakfast she's fixed for me. Then I listen again starting about noon until about six-ish, and then I take another break, sometimes even a nap. I get by on three hours' sleep a day. More than that, even with a helper, and you might miss something. So if you aspire to greatness, be prepared to put the time in on it. Remember: nothing worthwhile ever came easy; when the going gets tough, the tough get going; through the teeth and over the gums, look out stomach, here it comes!

C&E -- Could you explain that last reference, sir?

Zedd -- Sorry about that, I got carried away. You can't do too much with your aphorisms, I always say. But that one didn't fit too good. Well -- Idleness is the devil's workshop. Put that in there if you want.

C&E -- Mr. QR, I hear them starting up again in the Senate hearing room you have rented to allow the world press full knowledge of your expedition plans. There are so many things we want to ask you. Could we possibly have a fullscale interview with you when you return to Oklahoma?

Zedd -- Boy, it would be my pleasure. I like you. You're stupid, but you're humble. I like that in people that interview me. Just call me up any time on any band and I'll be there, you heah?

C&E -- You monitor all bands all the time?

Zedd -- Sure! Like I tole you, me or Tondelayo. You just git on there an' holler QRZ? An' I'll come right back to you, tellin' you the frequency is in use an' calling you a nerd an' a few funny things like that. I like to do that, gives me my jollies. But you just hang in there an' remind me who you are, and we'll talk. All right? All RIGHT!

--KU5B (ex-WB5TZ2)

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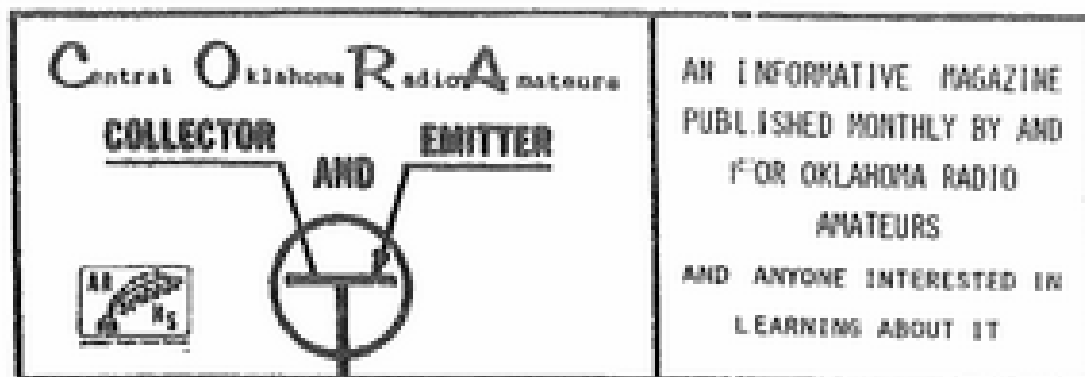
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Central Oklahoma Radio Amateurs, Inc. (CORA) is a non-profit association of radio amateurs founded for the promotion of amateur radio communication and experimentation for the advancement of the radio art and of the public welfare and operates to enhance the cooperation of member clubs in sponsoring activities of mutual interest to the clubs and all radio amateurs.

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

#### PARTICIPATING CORA CLUBS

- |   |  |
|---|--|
| <p><b>1 AERONAUTICAL CENTER ARC</b><br/>MEETS: 7:00 pm First Friday, Flight Standards Bldg., FAA Aero Center<br/>PR: W5CJG Bob Pace 376-1569<br/>VP: K5CDE Bill Oliver 329-6375<br/>Se: W5NSV Bob Graham 677-8685<br/>Tr: W5SAR Larry Rugg 789-4180<br/>EDITOR: Bob Graham, WB5NSV 677-8685</p>                                     | <p><b>11 EDWARD AMATEUR RADIO SOCIETY</b><br/>MEETS: 7:00 pm Third Sunday, Room 105 Science Bldg., Central State Univ.<br/>PR: K5SAP Clarence Hollenover 361-7143<br/>VP: W5SAPC Dan Brown 737-1141<br/>S/T: W5SQC Roger Harmon 349-1270<br/>FC: W5SAXX Ken Stepp 361-4874<br/>EDITOR: Bob Landa, K5SAP 361-7016</p>       |
| <p><b>2 OKLAHOMA CENTRAL VHF CLUB</b><br/>MEETS: 8:00 pm Third Friday, Red Cross Bldg., 10th &amp; Hudson, Oklahoma City<br/>PR: W5SIB Ralph Barlow 521-8330<br/>VP: W5FWD Bill Holland 354-5018<br/>Se: K5JB Joe Buswell 732-0676<br/>Tr: W5KE Clifford Foster 789-6702<br/>EDITOR: Joe Buswell, K5JB 732-0676</p>                 | <p><b>12 SHAWNEE AMATEUR RADIO CLUB</b><br/>MEETS: 8:00 pm Second &amp; Fourth Tuesday, Shawnee City Hall (FOC)<br/>PR: K5LFE Bob Almond 544-5134<br/>VP: K5FIE Walter Fultz 544-5948<br/>S/T: K5FPC Jim Sullivan 771-5543<br/>EDITOR: Jay Tiegler, W5SHU 771-5141</p>   |
| <p><b>3 MID-OKLAHOMA REPEATER, Inc.</b><br/>MEETS: 8:00 pm First Tuesday, Oklahoma City FOC, 4600 N. Eastern<br/>PR: K5CJM Fred Taylor 528-1517<br/>VP: W5POM Frank Arnold 717-1587<br/>Se: K5FED Susie Atkinson 842-0077<br/>Tr: W5KOT Sid Gerber 737-1050<br/>EDITOR: Susie Atkinson, K5FED 842-0077</p>                          | <p><b>13 KAY COUNTY AMATEUR RADIO CLUB</b><br/>MEETS: 7:30 pm Third Thursday, Security Bank, Rosemead, Ponca City<br/>PR: W5SBO Marsh Prenneke 361-2576<br/>VP: W5SQT Pat Burdham 361-2576<br/>S/T: Halbert Folles<br/>EDITOR: Marsh Prenneke, W5SBO 361-2576</p>  |
| <p><b>4 OKLAHOMA CITY AUTOPATCH ASSOCIATION</b><br/>MEETS: 7:30 pm Third Tuesday, Oklahoma City Fire Dept. Training Center, N. Portland<br/>PR: W5IH Henry Israel 722-3848<br/>VP: ADIS George Adkins 722-6195<br/>Se: K5SJS Judy Macdonald 672-4947<br/>Tr: K5LE Guy Liebmann 787-9545<br/>EDITOR: Henry Israel, W5IH 722-3848</p> | <p><b>15 SOUTH CAMPAIGN AMATEUR RADIO SOCIETY</b><br/>MEETS: 9:30 pm Second Saturday, Red Cross Bldg., North Campus, Norman<br/>PR: W5EY Wade Anderson 794-5344<br/>VP: K5SCU Charles Warner 364-9561<br/>Se: W5SOP Sam Barrett 321-2601<br/>Tr: W5SMT M. O. Townsend 374-4474<br/>EDITOR: Sam Barrett, K5SOP 321-2601</p> |
| <p><b>5 OKLAHOMA UNIV. AMATEUR RADIO CLUB</b><br/>MEETS: 8:00 pm (Sep-May) Second Tuesday, Carson Engineering Center<br/>PR: W5SRO Lee Hardy 325-4545<br/>VP: K5SCD Peter Richeson 329-3277<br/>Se: Tr<br/>EDITOR:</p>  | <p><b>16 EDWARD AMATEUR RADIO CLUB</b><br/>MEETS: 7:45 pm First Monday, See Club section for location.<br/>PR: W5SUT Stan Van Nort 341-4384<br/>VP: W5SIS Wendell Cochran 341-4384<br/>S/T: W5SRO Bob Shaw 341-4384<br/>EDITOR: Stan Van Nort, W5SUT</p>   |
| <p><b>6 ALTUS AREA AMATEUR RADIO ASSOCIATION</b><br/>MEETS: 7:30 pm Second Thursday, North Main Fire Station (FOC)<br/>PR: W5MMS Charles Smith 477-1098<br/>VP: S/T: W5MMS Dennis Denevitz 477-0194<br/>EDITOR: Dennis Denevitz, W5MMS 477-0194</p>   | <p><b>17 TRI-CITY AMATEUR RADIO CLUB</b><br/>MEETS: 7:00 pm First Tuesday, Location varies, see club section<br/>PR: W5SUN John Harrison 374-1141<br/>VP: W5SVL J. B. Bitts 374-1141<br/>S/T: K5SQA Nancy Hayden 374-1141<br/>EDITOR: Yvonne Harrison, W5SUN 374-1141</p>  |
| <p><b>7 BICENTENNIAL ARC (The 76'ers)</b><br/>MEETS: 7:00 pm Second Tuesday, Air National Guard, Will Rogers Airport<br/>PR: K5JTE John Galloway 670-5472<br/>VP: W5CET Jim Buswell 236-0368<br/>Se: W5SUN Jerry Sprawl 354-2061<br/>Tr: W5SRA Bill Rogers 632-4375<br/>EDITOR: Bruce Goff, K5SRA 751-6276</p>                      | <p><b>18 GREAT PLAINS AMATEUR RADIO CLUB</b><br/>MEETS: 7:30 pm First Tuesday, Rosemead Woodward Court House<br/>PR: K5CPW Bill Wyatt 354-3349<br/>VP: W5SOPH Bill Reed 642-2734<br/>Se: W5CCY Gerald Gorman 944-5371<br/>Tr: W5SOPG Donna Reid 944-2156<br/>EDITOR: Carla Tice, W5CPW 944-2156</p>                        |
| <p><b>9 WHEATSTRAW AMATEUR RADIO CLUB</b><br/>MEETS: 7:30 pm First Sunday, Location varies, see club section for location<br/>PR: W5SZE Ray Barnes 224-3334<br/>VP: W5SLO Dick Ruhl 715-4843<br/>S/T: W5SPEK Ralph Wilder 623-5421<br/>EDITOR: Ted Van Laningham, W5SPEK 623-5421</p>   | <p><b>19 SOUTHEAST OKLA AMATEUR RADIO ASSN.</b><br/>MEETS: 7:30 pm<br/>PR: W5SUT Ron Henson 374-5418<br/>VP: W5SUL George Weldon 374-5418<br/>S/T: W5SOPG Orville Kaley 374-1650<br/>EDITOR: 7:30 pm</p>   |
| <p><b>10 CHOCTAW AMATEUR RADIO CLUB</b><br/>MEETS: 7:00 pm Second Monday, Choctaw City Hall<br/>PR: W5SVP Bob Allen 391-2187<br/>VP: W5SUN Frank Carter 279-3975<br/>Se: W5SEP Syrena Standlee 279-3975<br/>Tr: K5ALO Richard Edwards 390-8297<br/>EDITOR: Syrena Standlee, W5SEP 279-3975</p>                                      | <p><b>CENTRAL OKLAHOMA RADIO AMATEURS, Inc.</b><br/>MEETS: 7:30 pm Fourth Tuesday, Red Cross Bldg. (Back door) 10 &amp; Hudson Oklahoma City. All clubs to send their three representatives.</p>   |

#### CORA OFFICERS

President	George Adkins	ADIS	722-6195
V-P	Ted Van Laningham	WD5JNT	262-1675
Secretary	Frank Yohe	N5CIJ	324-0772
Treasurer	George Maschino	K5 GGL	263-7614

#### POLICY

The New York Times says "All the News that is Fit To Print".  
The Collector & Emitter says "We print All the news That fits".

## Central Oklahoma Radio Amateurs

I would like to take this opportunity to say "THANKS" to everyone who has worked so hard during the past two years to make it my pleasure to serve as President of C.O.R.A. It was a lot of fun and also a lot of hard work at times. Without the help of too many people to name, it would be a thankless task. I would especially like to thank the other out-going officers and all of the committees who worked so hard on Ham Holidays. I feel this is one of the greatest organizations I have ever had the pleasure of working with, and I hope it will continue to prosper and grow in the coming years.

I believe you have elected a very fine slate of officers to lead you in the coming year. I hope you will give them the same cooperation which I received.

Chuck Wilhite, K5NK

I am honored to have been elected to serve as your C.O.R.A. president for the coming year. My message will be brief this month, but I will try to keep all members up-to-date through future columns from CORA. Please let your CORA representatives know what, if any changes you would like to see in Ham Holiday 82 because plans for 1982 have already begun. We must know what committee, ie. program, registration, facilities, etc. your club would like to handle in 1982. Hopefully all general plans for HH-82 will be essentially complete by FEBRUARY! that's my goal, anyway... I plan to visit all member clubs within the next 60 days. I will see you as soon as my schedule allows me to make a personal visit to your regular club meeting. My fellow officers and I will do our best to continue the fine tradition of C.O.R.A. and I sincerely solicit your assistance and input to make 1982 a successful year for all of us.

73 George Adkins, ADIS

A reporters view of the October meeting of CORA will be found on page 21.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION			
<p>1. Name of publication: <b>Central Oklahoma Radio Amateurs, Inc.</b></p> <p>2. Issue date: <b>October 1981</b></p> <p>3. Issue frequency: <b>Monthly</b></p> <p>4. Number of issues published annually: <b>12</b></p> <p>5. Annual subscription price: <b>\$3.00</b></p> <p>6. Office address: <b>1020 Arthur Drive, Midwest City, Oklahoma City, OK 73110</b></p> <p>7. Name and address of publisher: <b>Joe E. Harding, Same as above</b></p> <p>8. Name and address of editor: <b>Joe E. Harding, Same as above</b></p> <p>9. Name and address of business manager: <b>Joe E. Harding, Same as above</b></p> <p>10. Name and address of circulation manager: <b>Joe E. Harding, Same as above</b></p> <p>11. Name and address of advertising manager: <b>Joe E. Harding, Same as above</b></p> <p>12. Name and address of printer: <b>Joe E. Harding, Same as above</b></p> <p>13. Name and address of distributor: <b>Joe E. Harding, Same as above</b></p> <p>14. Name and address of subscription agent: <b>Joe E. 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# PUBLIC SERVICE IN AMATEUR RADIO

Irony prevailed during October's Simulated Emergency Test week in Oklahoma. One day of planned activity and five others unplanned put many of the state's ham operators to the test.

Extremely heavy rains in the southern half of Oklahoma caused flooding in many communities. One of the heaviest-hit was Madill, where many victims in low-lying areas were evacuated. The evacuation included patients in a local nursing home.

In Oklahoma City, members of the Oklahoma County A.R.E.S. were called upon to man amateur radio stations at Red Cross headquarters and the State Civil Defense Emergency Operations Center. Communications were established with Red Cross and Civil Defense personnel in Madill by way of amateur radio. For a period of time on October 13, amateur radio was the only communication into and out of Madill. Contacts to the Madill area were maintained through the next day.

On the 14th, in addition to the monitoring of the flooding at Madill, operators were called to the National Weather Service office in Oklahoma City. Severe thunderstorms developed in the western part of the state, and hams were on the scene to report conditions to N.W.S. Many amateurs participated through the 146.01/.61 repeater at Calumet.

Wet conditions plagued the metro area again on the 15th. A water-soaked cable splice in the telephone trunk to Norman caused isolation of the Norman phone system. Amateurs in both cities provided emergency inbound and outbound traffic for approximately five hours, when a single inbound phone line was established to Norman. Messages included law enforcement traffic, an accident report to a family, health and welfare of a heart attack victim, and doctor/hospital/patient messages. Agencies served were the Oklahoma City Emergency Operating Center, Oklahoma Highway Patrol, and a very grateful Southwestern Bell Telephone Company.

Rains continued on Friday the 16th, causing more alarm in the southern half of the state. An earthen dam near the town of Coalgate threatened to break from high water. Oklahoma County A.R.E.S. members were once again called to monitor for Red Cross and State Civil Defense agencies. Through a ham operator in Coalgate, State Civil Defense Headquarters was able to obtain an engineer's opinion as to the safety of the dam.

On Saturday, continuing rain once again threatened the dam at Coalgate. Although not actually called out, seven amateur operators were arranged for and were standing by. In all, over twenty inches of rain fell in southern Oklahoma during the week.

Sunday was the only day planned for amateur emergency activity. The Simulated Emergency Test began in the early afternoon, with the calling tree activated and completed within fifteen minutes. Stations were manned in the Oklahoma City E.O.C., State Civil Defense, and Red Cross. As hams checked in, they were assigned to various areas by the County Emergency Coordinator, Don Rooker, K5SJV. Some amateurs were assigned to go to Red Cross shelter areas, establishing links to headquarters, downtown. Civil Defense headquarters and the city E.O.C. had amateurs stationed for linkup with various municipal and state agencies. Both HF and VHF communications were used.

Dubbed "Blizzard '81", the exercise's premise was that a major blizzard was paralyzing Oklahoma City. Red Cross shelters were to be set up to cope with stranded motorists. Various problems were presented on the net operation which might occur in the event of a real emergency. Participation in the net was high, and the various agencies served were well-pleased with the activity.

The exercise was the first time in recent years that the State Civil Defense and Red Cross had operated an exercise simultaneously. And, for the first time ever in central Oklahoma, the agencies were linked with ASCII data terminals via two meters.

Don, K5SJV, County E.C. wishes to thank all parties involved in the week's activities. Our abilities as amateurs to provide links to "where the action is", has gained us much respect and notariety among agencies that can be served.

At the risk of leaving someone out, the following amateur radio operators were involved during the week: **NEXT COLUMN**

## \*OCT 13th - MADILL FLOODING \* AT RED CROSS, OKC (WSLOW)

WD5IRB, WA5JGU, W5HXL

### AT STATE C.D. E.O.C.:

WB5PUWZ, K5SJV, WB5ZKZ, K5VFN,  
WB5IMT, KB5RR, KA5ERL, W5FX,  
KB5XH, K5WUF, KB5BS, N5CPN,  
N5DCK, KA5MDI, WD5EXY, KA5IDG,  
WD5DYI

### ON STANDBY:

KB5KT, WD5DYJ, WB5CNM, K5YTU,  
W5OZE, WD5ETB, WB5YTO

### IN ARDMORE:

W5JP, WB5VKA

### CALLING TREE:

N5CTT, KA5ERZ, KJ5C, N5AWI

## \*OCT 14th - WEATHER \*

### FLOOD WATCH (WSLOW)

WD5IRB, WA5JGU, W5HXL

### SEVERE THUNDERSTORMS, @N.W.S.

AE5N, WB5TMW

FIELD REPORTS: K5GGL, WA5PFW and  
others in WHEATSTRAW CLUB.

STANDBY: K5SJV, WD5DYI

## \*OCT 15th - TELEPHONE OUTAGE, NORMAN \*

IN NORMAN: WA5JXX, N5MS, KA5COI  
and AF5X, Cleveland Co. E.C.

IN METRO OKC: N5BEV, WD5DYI,  
WB5RAG, K5SJV

## \*OCT 16th - FLOODING, COALGATE DAM \*

IN COALGATE: KC5NZ

IN ARDMORE: WB5VKA } RELAY STNS.  
IN RUSH SPRINGS: WB5YTO

IN OKC: WB5OHK Choctaw

AT STATE C.D. E.O.C.: K5VRL, WB5PUWZ  
WD5DYI, WB5ZKZ

C.D. E.O.C., TULSA: W5DAZ, KA5CYH  
K5ENA

## \*OCT 17th - STANDBY FOR COALGATE \*

K5SKA, N5AKQ, K5VRL, WB5HRW,  
KA5CXW, KB5KT, WB5PUWZ

## \*OCT 18th - SIMULATED EMERGENCY TEST \*

AT WSLOW, RED CROSS: K5SJV, WA5STAR,  
N5DCK, KA5CXW, KA5FED,  
W5HXL

AT STATE C.D.: WB5PUWZ, KB5BS, WB5ZKZ

AT OKC E.O.C.: KA5ERW

E. OKLA. CNTYEC: W5WZM STATE E.C.: W5ZTN

OTHER E.C.'S: WB5IMT, WD5ETB

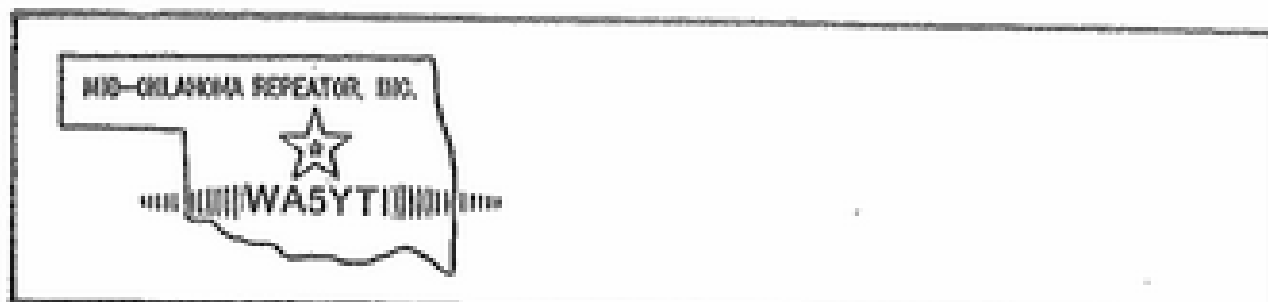
AT SHELTERS: WA9AFM, WB5TMW, WD5DYI,  
AE5N, WB5VBE, KB5RR

OTHERS PARTICIPATING: N5BEV, N5DWR,  
W5NBH, KA5CWT, KB5KT, N5DWN,  
K5LZF, K5SKA

NET CONTROL STATION: N5BEQ

AUDIO TAPING: WB5TKG

Our thanks to everyone who participated by listening. For more information about emergency activities, contact: Don Rooker, K5SJV County E.C.



When this is published I am sure that the nominating committee will have made their selection of candidates for future officers of MORI, 1982 -- so be sure to vote for your best choice. I am not sure to say who is running at this time, but it should be announced by publication in C&E or at our next meeting.

I know that I have said this before, but I am going to repeat it once again. THANKS for everyone's loyalty, confidence and support this last year (1981) for letting me serve both as your Secretary and Editor of MORI. It has been a very rewarding and satisfying experience for me. Many interesting things have happened, and there have been a few sad ones too, and the silent keys, etc. I just hope that 82 will be a very good year. I am in the process of making my New Year's resolutions now... (HI!)

I would also like to acknowledge the many many friends, the officers and members of MORI, etc., I really did enjoy working with all of you and getting to know you too. A great big thanks to Bob Graham and Joe Harding for publishing, printing, and mailing all of the issues for C&E. I heard a song once and the title is "EVERYONE IS BEAUTIFUL" and you certainly are.

\*\*\* In just a little over a week, the Hamfest in Texoma will be getting underway, and I think we are going to the whole thing, so I am looking forward to seeing some of the familiar faces, along with new ones. I will also be looking forward to seeing the "ole train whistler" Mel Zuck and his wife. They have always been very nice to me each time I see them either at Texoma or wherever.

\*\*\* Of course, Halloween is on its way too, I hope that everyone has a very safe one, especially for the kids out there when they are trick or treating.

\*\* In November will be the Batfish Expedition. Thanksgiving and several other activities, so be sure to check out the dates for the different things and plan to participate if you can, I sure am.

This is about it this time, but I want to apologize for not having an article in last month's issue, and I am not going to try and explain it all now, so see ya on the 3rd of November at 8:00 P.M. at the EOC unless different arrangements have been made.

73

KA5FED Susie  
1981 Secretary & Editor  
For MORI

MORI CONTINUES TO HAVE GOOD ATTENDANCE AT THE MONTHLY MEETINGS, WITH STIMULATING DISCUSSIONS. THE EOC IS A GREAT PLACE TO GATHER WITH LOTS OF ROOM AND TABLES FOR CONVERSATIONS WITH OUR FRIENDS. THE OCTOBER MEETING FEATURED TOM, W5OZE WITH HIS FRIEND FROM THE LIBRARY FOR THE BLIND. HE BROUGHT SOME FASCINATING EQUIPMENT THAT IS DISTRIBUTED BY THAT STATE OFFICE. THE TALKING CLOCK FROM TOMS HOUSE WAS VERY CLEVER....

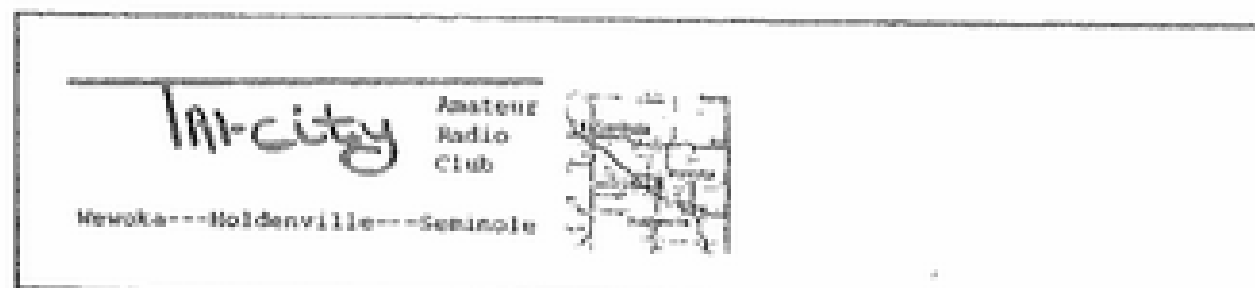
AS MY TERM WINDS TO A CLOSE MY MEMORIES INCLUDE--DES ALL THE PUBLIC SERVICE EVENTS THAT WERE ALWAYS ATTENDED SO WELL BY MORI MEMBERS. THANKS GUYS FOR PITCHING IN WHEN NEEDED. THE 07/67 REPEATER IS FAMOUS FOR THE FINE FOLK THAT ARE ALWAYS STANDING BY TO HELP THE MOTORIST, OR TIMES WHEN TRAFFIC HELP IS REQUIRED.

THE NEXT MEETING, NOV. 3 AT THE EOC. WE WILL HAVE ELECTION OF OFFICERS... HOPE TO SEE THE BEST CROWD EVER.

TRAVELLED A BIT LAST WEEKEND TO CHURCH CAMP AT CAMP EGAN NEAR TAHLEQUAH. I OPERATED THE ARGONAUT 509 WITH A LONG WIRE FURNISHED BY A LOCAL AMATEUR DR CARL MAHANEY K5JLS, A LOCAL AMATEUR FROM WAY BACK. DURING LUNCH HE OFFERED THE WIRE IN LIEU OF THE VERTICAL I PLANNED TO SET UP. LOTS OF GOOD CONTACTS EXCEPT FOR THE 75 METER BAND WHICH APPARENTLY ELUDED ME.

SEE YOU AT NEXT MEETING.....

FRED KA5CXW  
M O R I



Tri-City Amateur Radio Club has met twice since last report, once with a coffee September 13 to honor W5AOC for his 50 years in amateur radio. Leonard WA5FSN representing ARRL presented a plack and pen, the Mayor of Holdenville presented an appreciation plack from the city and WB5UBB presented a plack from the TCARC. A good turnout to honor Reedy was present. Reedy is known for his QSL card printing.

Our club has lost a good amateur to Bristow and we lost our sec/treas but Bristow has gained a good amateur and family. The railroad ran at our last club meeting and elected a new sec-treas, she is WB5TYW Yvonne, also the pres. appointed a new editor-reporter and she is Marsha, a student of our code class who is ready to take her written test along with husband Jim.

Due to the high rent of our meeting place a new place was necessary so WB5UBB WB5TYW offered their patio radio shack for regular meetings. Our meetings are the 1st Tuesday of the month at 7:00 P.M.

WB5TFX traveled to Dallas in August to test for his much sought after Advance Class upgrade: congrats Ben. Wife Pat WB5TFY giving the code test to our new members. KA5CGN Jeff nursing a broken collarbone received in a game of touch football.

WB5VLT and XYL, WB5UBB and WB5TYW traveling east across the border to the Mena Ark Ham Meet and swaporama in Sept. WB5VLT brought home a Tempo S-1 for his shack. WB5UBB brought home a pre-amp for his shack and is very proud of it, really works, can hear N5DOWN direct at times even.

N5CJH adding to his antenna farm ordering a set of stacked 14 element beams for his 2 meter, maybe he will get out of that hole yet.

WB5OFC seldom heard since it school and fair time around the state.

W5ITH, Earl; WB5VPS, A.B. of Wewoka and WB5VPW of Shawnee returned to club at last meeting, really enjoyed their visit, maybe they will be regular again.

W5PBY, Russell teaching at Seminole Junior College this year, Congrats Russell.

We missed WB5TFX at the last meeting while he vacationed in the big city, glad your home now and out of the hospital Ben.

See all down the log;

Yvonne



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NEWS

PILOT  
The Ham Radio Magazine

THIS SPACE INTENTIONALLY LEFT BLANK.  
"WHITE SPACE INCREASES READERSHIP"  
ed

#### MINUTES OF SEPTEMBER MEETING

Meeting was called to order at 8:02 PM by President Ralph, WD5IRB, with 14 members and guests present.

Treasurer Ellard, W5KE, presented Treasurer's report.

Steve, W5VCJ, reported on progress of quarter century celebration of VHF club next year. Meeting on this matter is scheduled for Oct. 4 at Red Cross and Ralph, WD5IRB, is to schedule the room. Steve passed a list on lost members around for those present to study and update.

Paul, WA5HTL, Charlie, WA5JGU, and Ellard, W5KE, will be CORA representatives for the next year. Bob, W5HXL, will act as alternate.

Motion was made and passed that the club ask for assignment to man the ARRL booth at Ham Holiday next year.

Ralph reported that application for ARRL affiliation was submitted, and after by-laws are sent, should be accepted.

Problems with the 80 and 40 meter antennas were discussed. Antenna party will be held Sept. 26.

Diane Fuller, acting Disaster Director, ARC, briefed the group on recent activity and re-assignments and reaffirmed the cooperative arrangement with the amateurs. She discussed some problems and procedures that will be worked out. Three problems facing the ARC are maintenance of radio equipment (theirs), antenna maintenance, and survey procedures involving amateurs. Several helpful suggestions were made then and at the after meeting.

Charlie, WA5JGU, and Bob, W5HXL, showed slides of their Colorado trap, each telling his own side of the stories, hi.

Meeting was officially adjourned at 9:30 PM.  
Joe, K5JB, Sec'y

#### ANTENNA PRUNING - HIGH TECHNOLOGY

While we were sitting around talking about re-working the antennas at ARC, I was reminded about one time when we were working on the things and I had just become the first kid on the block with a HP-35 calculator and was using it for any excuse of a problem that came along. I had it down at the Red Cross that day and seized on the opportunity to show off when it came time to prune the antennas. The same method is just as valid today and can be used by anyone who wants to make just one trip out to the yard after the basic thing is up.

If the basic formula of 468 divided by the frequency, in MHz, is used to get the length, in feet, and a little tad is added just for good luck, the antenna should come out a little long. For example, suppose the resonant frequency on a 75 meter antenna comes out at 3800 kHz and the desired resonant frequency is to be 3900, the change in frequency is going to be 100 kHz. Grab the calculator and divide 100 by 3800, the observed frequency of the thing. The answer is .026315789. Now you wouldn't do that by hand, would you? What that number represents is the amount the antenna needs to be shortened to raise its frequency 100 kHz, as a function of the length of the antenna.

Suppose the length of the antenna was supposed to be 120 feet, plus a tad, remember the tad? Forget the tad, it is not important anyway. Just take the 120 feet and multiply by the

number found previously. If your calculator will do chain calculations, you don't even have to write the number down. In the example given, you get 3.1578947 which is the number of feet the antenna is too long. Divide this by two and get 1.5789474, the amount that each end is too long. Subtract the 1 and multiply the remainder by 12, like in inches per foot. The answer, 6.94, etc. is the number of inches to be added to the foot you just subtracted. The result, if I did it right, is about one foot, seven inches, that needs to be removed from each leg of the antenna. If you are still worried about the tad, crack open another 807 and try it again with the antenna assumed to be 121 feet long. The amount to be removed will work out to be one foot, 7.1 inches. See why I said not to worry about it? Joe, K5JB

#### MINUTES OF OCTOBER MEETING

Meeting was called to order at 8:05 PM by President Ralph, WD5IRB, with 17 members and guests present.

Ellard, W5KE, read the treasurer's report.

Ralph reported on activity at W5LOW during flooding at Madill and other southern Oklahoma towns. Dianne Fuller, ARC, had expressed her appreciation, though she couldn't make the meeting. Some discussion followed on updating list of operators checked out on W5LOW equipment.

Jim, K5VRL, reported on meeting held Oct. 11 by Steve, W5VCJ, with those interested in the twenty fifth anniversary celebration of the club next year. List of past members, not yet found, was divided among those present to continue effort to find them.

There was some discussion of condition of the portable generators owned by the club and discussion of the HF amplifier bias current.

Jim, K5VRL, reported on activity at state EOC related to dam overflow at Colgate.

Ellard and Paul, WA5HTL, reported on CORA meeting. Carl, W5JJ, pointed out that as soon as date is established for Ham Holiday '82, ARRL should be notified to prevent scheduling conflicts.

After some discussion of desirable articles for C&E, meeting was adjourned at 8:56 PM.  
Joe, K5JB, Sec'y

#### ASCII REPEATER

The ASCII repeater operators meet 2nd Thursday of each month, 8 o'clock, at Heathkit store.

#### FUTURE C&E ARTICLES

During the last club meeting, a lot of good ideas for future C&E articles were kicked around. Some were oldies, but goodies. Some were on subjects I know nothing about, or would have to do quite a bit of research on. For example, a good home brew deviation meter would be a good one. Getting on the air with ASCII would be another one. Getting on 1296 or 2305 with some of the readily available radio snack type devices would almost justify fooling around with an MDS converter kit. How about some of you who have had some experience passing it along via C&E? If you don't feel like writing it, give me the details, I'll do my best to put it into print. Joe, K5JB

FOR SALE Yaesu FT-570, a 10 through 80 meter transceiver of 500+ watts PEP, in mint condition. \$375. With matching desk mike \$390. Dale, W5KYL, 478-4900

## FIXIN YER RIG

Did you ever give up on fixing your equipment because you didn't have a 'scope, or you were afraid you would mess it up, or you just didn't know how? Most people are overwhelmed by the equipment they own, and when it breaks, they look for someone to fix it without trying too hard to investigate the problem and fix it themselves. Others are not afraid to tackle an IC-720 that has been struck by lightning, see N5MS article elsewhere this issue (or maybe next month's). Well, I would rather tackle a broken radio than a broken automatic transmission in my car, cause it is much cleaner, and I hate to fall prey to the repair shops.

I didn't learn how to fix things by tearing into an IC-720. I started by messing with little blitty circuits first, like code practice oscillators, and found out much later that the most sophisticated equipment was only different in the quantity of circuits involved. At this point, I want to make it clear that I don't thrive on fixing things. I hate it when things break and I don't work on other people's gear. I do it to my own gear for survival reasons, but I do admit a certain feeling of victory when a problem is corrected.

My most revealing lesson was when I built a Heathkit SB-101. When I opened the box, I nearly went into a depression when I saw all the parts. After the initial shock, I started soldering the first parts on the first board. A short while later, the first board was completed and I had my first feeling of accomplishment. Board after board passed quickly and before long, I was wiring up the final assembly. My first taste of troubleshooting terror followed immediately thereafter. The thing wouldn't work. The troubleshooting chart was nearly worthless to a person in panic. It would have taken as long to start with the power cord and work up to the problem, as it did to build the rig. With help of a general coverage receiver, I determined that all oscillators were running but one mixer product was missing. Exchanging mixer tubes brought the receiver to life.

Two lessons are important from this experience. A complex piece of equipment is only a collection of simple circuits, and, logic is the most important troubleshooting tool.

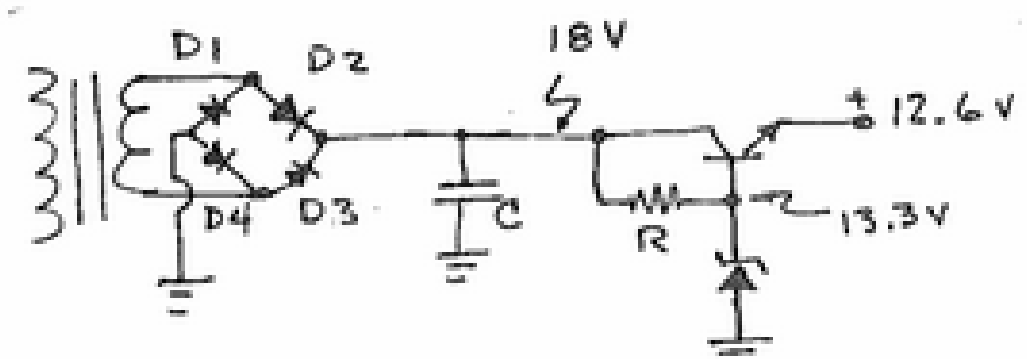
Solid state equipment presents a problem that kills the enthusiasm of the potential fix-it-person. It is difficult, and unwise, to test by substitution. The oldtimers who refuse to tackle a solid state problem because they "were brought up on tubes", probably didn't analyze problems with the tube gear either. Tubes were, and are, the unreliable parts of the circuit. When something went bad, it was probably a tube, and it was possible to fix it by changing them until the problem went away. Transistors and integrated circuits are now the unreliable parts, after loose connections are corrected. It is wise to apply the logic first and soldering iron second.

Now to the point of this article. No one is born with the sense of logic that it takes to isolate the problem in a modern transceiver. It takes practice, and of course, more the better. When a piece of equipment fails for the first time, there is a fear of the unknown which has to be overcome. There should be no fear in investigating, as long as it is done carefully and in the right frame of mind. About the only thing that can badly mess up the thing is applying power carelessly and shorting a circuit against something and compounding the problem. If disassembly is deliberate and, if necessary, notes are taken, there should be no fear of getting the thing back together properly. The first bit of logic is applied before the thing is opened up. If it won't transmit, the problem is probably somewhere in only 40% of the circuit. If it won't receive, the problem is in another 40% of the

thing. If it won't do either, one only has to look in maybe 30% of the thing. Already the problem is not as large as it first appeared.

A study of the block diagram and schematic of the rig is in order before it is opened up. The modern imported rigs are a mess in this department. A repair manual is a big help but not at all necessary. If the owner's manual contains a table of transistor voltages, the problem can be found probably 90 percent of the time with a simple volt-ohm meter. All that is required is a systematically executed series of measurements, recording results as they are found. If serious variations in voltage are measured in several places, a study of the schematic will reveal what part, or parts may be at fault. I caution that the first observation of a wrong voltage may not be the last and a transistor or integrated circuit should not be jerked out until thorough checking of associated components verifies where the fault lies. Measurements should be made carefully, and in good light, because a slip of a voltmeter probe can render a good transistor assunder.

The most important item of knowledge is how a transistor works. It is really quite simple if you ignore all the atomic physics that modern technical schools feel compelled to teach. The inventors of transistors were pretty smart and I admire their wisdom in selecting the symbols for diodes and transistors. Without getting into an argument about which way current flows just look at the figure and assume it flows in the direction of the arrows. The circuit is a voltage regulator with diodes, an npn transistor and a zener diode.



Simple Voltage Regulator

Lets say the transformer is working and the bridge appears to be ok because the 18 volts is present, but the output is low when a small load is applied. There are only three parts left to be examined if the 18 volts is undisturbed when a load is applied. One could replace all three parts easily enough but in a transceiver made up of dozens of circuits containing dozens of transistors, operated exactly like this one shouldn't be butchered in that manner. Lets use some logic.

Suppose the 13.3 volts seems to disappear when the output is loaded. let's check the voltage drop across the base-to-emitter junction of the transistor. Under all normal circumstances there should be about .7 volts drop, meaning if the positive probe is put on the base and negative probe is put on the emitter, the meter will read plus .7 volts. If it reads zero, the transistor is shorted and all the current is being supplied through the resistor, and that aint enough. If the .7 volt is present, the transistor could have low gain, but the resistor could be at fault. Neither is likely but it has to be one thing or the other. The zener can fail by going open or going shorted, or even going soft but none of these symptoms are indicated. When current is drawn from the emitter circuit, the zener will experience a reduction in current and if it was soft, its voltage would decrease! What have we now? the problem could be the resistor, the transistor or the zener. In the order of probability, I would pick the zener, the transistor, and then, the resistor. But, suppose you don't know all this. Some more testing is indicated.

The easiest thing to test is the resistor. Using the ohmmeter, the resistor can be checked for gross problems. In the circuit, the other components can cause an error on the low resistance side but won't cause a high resistance reading. If a high resistance is found, another resistor can be temporarily tacked to the circuit and the regulator checked to see if it is operating any differently. At this point, the problem is probably fixed, but, let's say the ohmmeter check shows the resistor is probably okay.

The zener can also be tested by tacking a good one into the circuit. In this circuit, I bet that would solve the problem. It is highly unusual to find a transistor with low gain. They either short out or open up. It is not unknown though so don't be trapped into thinking it is impossible.

By this time, we have probably fixed our sample circuit but let's analyze it some more any way. The bridge is supplying current to the capacitor, the resistor and the transistor. If you have not learned to follow the current around the bridge circuit, now is a good time to do so. Start with the half cycle of the AC waveform where the top part of the transformer is positive with respect to the bottom. The current will flow in the direction of the arrows. D2 will be in conduction. The current will flow through D2, through the resistor, through the zener (it's backwards, that's why they are drawn funny), to ground, back to the bridge, through D4, to the bottom of the transformer winding.

On the other half cycle, the top of the transformer is minus, the bottom is plus. Current flows from the bottom of the transformer through D3, through R, through the zener, through ground, through D1, to the top of the transformer. If an external circuit is connected to the transistor emitter, most of the transformer current would flow through the collector to the emitter and out through the circuit to ground, returning to the ground connection of the bridge. (If all you tech school graduates want to flow the electrons backwards through the arrows, it is alright with me.)

Now if one of the diodes in the bridge is open or shorted some peculiar things can happen. If one is shorted, the transformer can be in serious distress. A shorted diode will not permit the voltage to climb when the cathode is positive with respect to the anode. This means that during one half cycle the transformer will operate into a shorted load until the good diode carrying the current in the proper direction opens up, a fuse blows, or both. If one of these things happens, we go to plan B. The power supply cannot be operated for an extended period of time without overheating it or blowing another fuse, as applicable.

The trusty ohmmeter can be brought into play to check out the diodes in the bridge. At this point it would be a good idea to determine which lead of the instrument is positive and which one is negative. The easy way to do this is to use a second meter as a voltmeter. If one is unavailable, a known good diode can be used. When the positive lead of the ohmmeter is put on the anode, the diode will show a low resistance, when the negative lead is on the anode, the ohmmeter should show an open circuit. It is best to use the x100 or x1000 scale to get a reasonable forward scale reading.

Troubleshooting this bridge is made easier if the transformer is disconnected. Only one lead needs to be removed so that the effective short circuit of the winding won't confuse the reading and make you think so hard. This is supposed to be a beginners project, remember? Diodes are either good, open or shorted. It is highly unusual to find one in a circuit like this leaking, avalanching or otherwise breaking down because such a failure will degenerate to the open or shorted condition.

When replacing power supply diodes, it makes little sense to replace them with anything less than the best. There is so little difference in price between a low voltage 1N4001 and a thousand volt 1N4007, you might as well use the latter.

I think at this point we have worked the poor power supply to death. There are a few points worthy of mention about the more complex circuits found in the broken transceiver. All the transistor is doing in the regulator circuit is amplifying. It is amplifying the current supplied through the resistor. This current is controlling the current flowing out the emitter. It is an emitter follower. For all intents and purposes, the emitter current is the same as the collector current. The base current is therefore controlling the collector current but we don't care in this circuit. In a lot of circuits, we do care. If we find the voltage is unnaturally low on a collector, we should check the base voltage carefully because the transistor may be okay and is being driven too hard by another component which has failed.

PNP transistors are not as common in circuits but are used sometimes and have to be watched closely. It has been my experience that PNP silicon transistors cannot stand much voltage abuse and can be suspect if they are involved in a circuit that has screwy voltages.

Even in rf circuits, the trusty old voltmeter can be used in most cases because even if the circuit is disrupted by the voltmeter probe, bias voltages will remain unless they are created by rectification of the rf. This usually happens in oscillators and power amplifying stages. Oscillators are best tested by checking emitter voltages. They usually have low value of resistor between emitter and ground and proper voltage will not be too seriously disturbed by the vom. Proof that an oscillator is operating is whether it can be heard in a general coverage receiver.

Power amplifying RF circuits are difficult to check with the ohmmeter because they are often connected in extremely low impedance circuits, like zero ohms! It is not unusual to have base and emitter wired together through a coil or stripline. In a dead circuit containing two transistors in push-pull, one trick is to short one base to ground, and then the other. If one transistor is open, shorting its base to ground will allow the other one to be driven and the power output will rise to approximately half the value expected of a properly operating circuit.

Integrated circuits require the most study of all before deciding to rip out and replace. First, there is more potential for damage to the circuit board. Second, because of their complexity, there is more to go wrong and it is more difficult to find out what is wrong. Sometimes it helps to look at a manufacturer's data sheet to determine if a peculiar voltage might be caused by internal failure of the device. Normally, a careful study of the circuitry surrounding the device will eliminate other possible sources of improper voltages and confirm the need for major surgery.

Perhaps I should have started with the most obvious cause of problems in modern equipment but I will end with an optimistic note. In my experience, connections made between plugs and sockets, or components and sockets, are the most common cause of problems. An integrated circuit in a socket is three times as likely to fail in the circuit than one soldered in place. Fortunately, fixing the problem consists of wiggling the thing. If the device itself has failed, replacement is much easier, of course. With few exceptions, I much prefer integrated circuits be soldered in place.

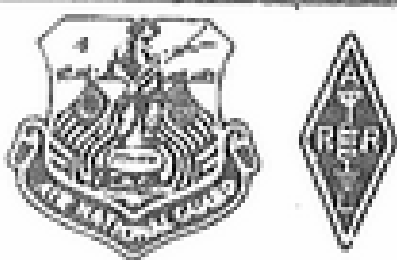
I hope this rambling collection of observations at least removes some of the timidity of living with one's equipment. Joe, K5JB



# BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

Sponsored by Oklahoma Air National Guard  
ARRL affiliated



## MINUTES FOR OCTOBER

The October meeting of the 76'ers was called to order by president Bill Skipper, KB5BS, at 7:00 with 24 members and guests present.

The minutes of the September meeting was presented by secretary Jim Buswell, N5BEQ, and were approved as printed in the C&E. The treasurer's report was given by Joe Couch, WD5BMP, and was accepted as read by a majority vote.

The treasurer also made note that he had received a check for \$4.00 from Charlie Kannamer for his dues for next year. A motion was made to accept this as Charlie was not aware of the increase in club dues to \$10.00 on account of all the assistance Charlie was to us on repeater maintenance while he was living in Oklahoma.

The CORA report was brought by representative Joe Couch and a discussion followed about recommendations for HH 82. A majority opinion of the club was that HH have Friday night activities but that they be held downstairs in immediate vicinity of the registration table. Discussion was held in regard to the duties of the 76'ers in HH 82. Majority consensus was that it was OK to change jobs if CORA requests, but we would prefer to keep registration. The club also expressed an opinion that the winner of the main prize at HH be required to be present to win or have an authorized rep. holding his ticket.

The next order of business was the election of club officers for 1982.

The nominations for president were: Bill Skipper, KB5BS, Jim Seals, KB5XN, John Galway, KH6JTE, Jim Buswell, N5BEQ, and Ted Van Laningham, WD5JNT...The winner is John Galway. Congrats to John, I think. He will do a great job.

The nominations for vice president were: Jim Buswell, N5BEQ, Ted Van Laningham, WD5JNT, Jerry Sproul, N5AUH...The winner was Jim Buswell...Jim has done a great job as secretary and will do us a great job as veep.

Nominations for secretary were: Jerry Sproul, N5AUH, Bruce Goff, KC5CR, Jim Hopkins, N5BFD, and Ted, WD5JNT...The winner, Jerry, N5AUH.

Bill Rogers, WA5RAQ was railroaded into the treasurer job...by an acclamation vote.

Nominations for activities director were: Jim, WA5TDW, Paul, WA5HTL, Dick, WB5TMW... Jim, WA5TDW, won but was promised lots of help from the losers.

Bruce Goff volunteered for editor...good going Bruce.

Ted, WD5JNT, was appointed by new president John Galway to head up a committee to try to increase attendance at meetings.

New Business: It was determined that the club should start checking into a new location for club meetings as the Air National Guard will be moving to Tulsa shortly. Ken Burdick, K5UAB, advised that he is trying to secure an alternate site on base.

A motion was made and carried to adjourn...  
Jerry Sproul, N5AUH

FOR SALE: Drake TR7/DR7 with MS7 power supply, 300hz, 1800hz & 6000hz filters. MS7 speaker, FA7 fan & shop manual. \$1495.00. Call Art, W5PTM, at 732-8401.

FOR SALE: Heath HW-100, AC supply & mike \$265. SB-200 amplifier (w/10m) \$220. SB-620 scope \$65. Mobile supply for HW-100 \$40. HW-202 2m/crystals \$120. Misc. hardware and coax. Call Rog, WB5PTJ, at 721-8851.

WANTED: CB antenna for my motorcycle. Antenna Specialist or like. Joe, WA5ZNF 737-1044.

HELLO EVERYBODY!

First off, I would like to congratulate our new officers, and say hello to everyone myself. This is a new experience for me and I hope to provide some interesting articles for you in the next year.

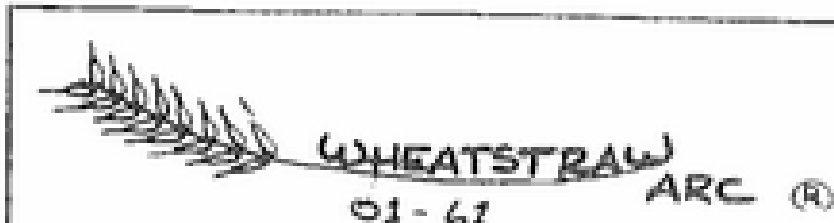
Second, I would like to invite everyone to give me anything you would like printed in this column. By this I mean technical, operating news, and the like. Also, be certain to give me any "classified" ads that you want to have put in the C&E. I will probably be able to get them in the next issue. This column is for your benefit and I would like to know how to make it better.

DE KC5CR/R OKC

Now for some important things. I'm sure that everyone knows about the repeater call sign change (well, almost everyone), but I thought I'd go ahead and say it again. The new call sign is KC5CR, reason being that our former call, WR5ANG, expired. When the FCC quit assigning repeater calls (calls that begin with WR) they decided not to renew them as well. When this happened to us, we had to either get a new call sign or go off the air, so that's why we did it. The reason was not simply for change or any other reason. I've heard quite a few complaints about the slow 10er and if you really want it sped up, we'll be happy to oblige. In the meantime, all you non-hams out there be advised that the 76ers have code practice at 5 words per minute at 10 minute intervals on 146.76 megahertz.

Bruce Goff, KC5CR

FOR SALE: Ten-Tec Hercules 444 Linear Amp. Fully solid-state...no tune-up and automatic bandswitching with the Omni or Delta Xcvrs. Just back from Ten-Tec with all latest mods. This is a beauty which worked A6X, CE0X and XZ5A. 10 - 160 including the new bands. \$1000. For info and demo call George, AD1S. 722-6195.



The monthly club meeting that was on the calendar for Calumet last month was rescheduled. Several of the members decided to motorcade to the Beaver Hamfest. Beaver has their repeater on the same frequency, 01-61 as our repeater. It happens to be our channel. I wasn't able to go along so we asked Johnny, K5GBN if he would write a short article on their excursion. I have not decided if they went up there to check on the welfare of OUR Frequency, or if they went to judge the flavor of their dinner. Lets read his story and find out.

The Wheatstraw Club skipped the regular meeting and a group of five mobiles drove out to the Beaver Hamfest. The following made the trip: WA5VNF, WA5GKH, WA5PFK and XYL, WA5FLT and YL, KA5DUO and XYL, and K5GBN and WA5RLP. The group enjoyed the get together very much. A covered dish dinner was enjoyed by hams from Oklahoma, Kansas and Texas. After the fellowship and dinner the group made a tour of the park north of Beaver and headed for home. KA5DUO gave the group a tour of Ft. Supply Lake on the return trip. Ft Supply Lake is a very nice lake and looks like a fine place to camp out. All made it home safe and sound in spite of rain and mist, both going and return.

All members should remember that the Wed. Night Net will change the time to the winter sked which is 8:30 when the time changes later this month. Next club meeting will be at the Christian Church in Calumet on Nov.8th at 2:30



"Reason is the life of law"

The October meeting was called to order by Pres. Bob Allen W5BVP with 15 members and 6 guest present. Richard gave the treasurers report and was accepted. June W5ANV gave a report from COMA. The issue was Ham Holiday 1982. Several suggestions were made and will be taken to CORA by Bill KA5ASA and Connie KA5ANZ.

We are looking for a new location for the 9.69 repeater. Mike K5UV has been checking into a few locations for us. It has been narrowed down to two locations. Some test are going to made and a check into how much expense there is going to be before we make a final decision.

The USS Batfish DX expedition is coming up on the 13th and 14th of November. Operations will begin on November 13th at 8:00 AM till 12:00 PM. And on the 14th from 7:00 AM till 4:00 PM. The bands will be 22 ACS above extra bands-38.05 71.68 14.230 21.268- we need operators. Bring your own equipment and a logger. We need to have 4 operators and 4 loggers going at all times during operation. There are other sites to see and things to do so bring the wife (husband) and the kids. There will be a picnic on Saturday after operations close. Bring your own food and drinks.

Lad W5FX gave us another talk on the atmosphere. Did you know that the air pressure on our bodies is 15lbs per sq. in. This is called 1 atmosphere. That 3 1/2 miles up in the Andes is the highest permanent human dwelling this is 1/2 atmosphere. That our air is made up of 11 gasses. That the sun radiates lots of different kinds of energy and our atmosphere protects us from harm by restricting all energy except visible light and radio frequencies? If you want to here more come here Lad at the next business meeting. You will enjoy listening to him.

Leon W5AZP and Larry W5EAO just returned from a trip to Organ. They went to visit there son they had not seen in 4 years. Mary went down by bus. She saw some pretty country on her way. She had one scary incident. The brakes on the bus kept going out. At one point they were climbing up a mountain and she looked out the window and could see nothing but a steep drop-off. She was glade to get down to the other side. The bus took them up Mt. Hood. Larry said it was a beautiful sight. They were about 40 miles from Mt. Saint Helens but were not able to see the top because of the clouds. They did get to see a little of it in the air on there way home. They also brought back some ash for us to see and feel. If anyone would like to see they will have some with them at the meetings.

There will be a dinner meeting next month on November 9th at the Furr's Cafeteria in Midwest City at 7:30 PM. Everyone is welcome. We will have a business meeting on December 14th at 7:00 PM at the Choctaw City Hall. Lad will give a talk on objects out in space-things we know and don't know.

Our sympathies go to Bob and June Allen for the loss of his dad this month.

Whats about all that is going on this month so see you right here next month. 73

W5BSP  
Syrena



LEONARD HOLLAR, WA5FSN  
SECTION COMMUNICATIONS MANAGER

I keep hearing 'Rumors' of plans and some work to link some of the repeaters across the State. Then all of a sudden it gets awful quiet along the 'Front'. What do we need to get some of these projects off of the ground and in and on the air. Winter time is a fine time to assemble the necessary equipment, then go to the field next spring. How about it??

My wife and I wish to take this opportunity to thank all of you for your Well Wishes Cards and other offers of help during her recent Hospitalization. It is times like this when you really understand what a fine bunch of people you are.

Some curious statistics: West Gulf membership, 10-1-80: 9738; 10-1-81, 9738. FCC says On 8-28-81 We had 4802 Amateurs in Oklahoma and 23,339 in Texas.

#### September 1981 Nets.

Net	Sess.	QNI	QTC	WX
O.P.O.N.	21	198	38	
S.T.N.	26	363	71	
O.T.W.N.	26	407	313	294
O.N.O.N.	30	630	77	
O.L.Z.	30	191	57	
Q.C.W.A.	4	150	11	

With Harold Herndon, WA5ZOO as Net Manager for the 5 O'clock Net and Bennett Basore, W5ZTN as S.E.C. We hope to see some improvements in the Traffic Count and other Amateur Activities. Give these fine gentlemen your support.

*Leonard Hollar*

#### FOR SALE FOR SALE

ESTATE SALE OF SILENT KEY, WALLY WHITFIELD, W5CWC. LISTED BELOW ARE ITEMS NEEDED TO BE SOLD. CONTACT LARRY DILLARD, W5CWB, AC 405-348-2634

- 1 54' Tri-Ex Crank-up tower
- 2 2-sets of 2 meter skeleton slot antennas
- 3 1-11 element Cushcraft 2 meter ant.
- 4 ham-m rotor w/ control box
- 5 5 element Cushcraft 6 meter beam
- 6 Kenwood TS820s
- 7 Clegg FM27B
- 8 Gonset 2 meter sidewinder
- 9 Astatic D-104 mic.
- 10 Heath HS-24 speaker
- 11 Heath HD-10 keyer
- 12 KLM Echo II, 2 meter transceiver
- 13 Heath VTVM
- 14 Heath SB110A, 6 meter transceiver, w/PS
- 15 Heath SB500, 2 meter transverter
- 16 Regency HR2A, w/ crystals
- 17 Heath HG-10B VFO

FOR SALE--MAKE OFFER KENWOOD TS 520 WITH C.W. FILTER ALSO SP 901P PHONE PATCH. ONE OWNER, BOUGHT NEW.. BROWN BROS PADDLES WITH ELECTRONIC KEYS, TENPO VHF 1 PLUS (10-25 WATTS) WITH OUTBOARD PHONE PAD. IF INTRESTED CALL W5SVN JACK IMAN 677-8537 OR 686-2403..



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6-2

KA5GTM - Dennis Musser	H: 524-4760
	W: 525-8282
KC5HD - John Clement	H: 942-0186
	W: 943-2467
KA5HRH - John Fedderson	H: 373-1537
	W: 789-5000
WD5HRW - Oscar Lofstrom	H: 947-3685
WA5HTL - Paul Asplin	H: 521-2861
	W:
WD5IDE - Harry Schoenhals	H: 789-6433
KA5IDQ - Max Cochran	H: 942-3825
	W: 272-9876
N5IH - Henry Israel	H: 722-3848
WD5ISS - Don Saunders	H: 751-0404
	W: 843-9653
WD5IWZ - Lynn Shearer	H: 751-9500
	W: 341-8551
KA5JUJ - Martin Brody	H: 751-3116
	W: 751-6781
WD5KFT - Clara Storm	H: 495-6228
KB5KT - Dave Baugh	H: 787-4183
	W: 734-4114
KE5M - Ron Recer	H: 731-5378
	W: 427-6511
W5NZS - Larry Hazelwood	H: 848-6400
	W: 842-4403
WB7OAA - David Roper	H: 722-2151
	W:
W5OEC - Ed Duclos	H: 495-2797
	W: 232-2362
W0OHD - R. L. Ray	H: 354-6241
WA5PDH - Mike McElroy	H: 722-2466
	W: 325-8991
N5PS - Pat Sherrill	H: 943-3219
W5PZW - Tom Sirilo	H: 354-3790
	W: 943-2406
WB6QLL - Foy Pulliam	H: 722-2076
	W: 686-4239
WB5RRZ - John Beatty	H: 721-5395
WB5RUP - Alvin Hall	H: 843-6890
	W: 848-7571
K5SKA - Bill DeMand	H: 751-5137
	W: 341-2980
N5SW - Chuck Guschke	H: 722-3190
	W: 789-1951
WA5TAR - Sid Rose	H: 946-5719
	W:
K5WUF - Dale Diehl	H: 943-5438
KB5XH - Haven Mankin	H: 524-0004
	W: 632-1661
K5Yaq - Clarence Sittel	H: 947-4015
	W: 521-2619
WB5ZKY - Chas. Fitzgerald	H: 842-9608

#### SECTIONS 3 AND 4 COMBINED - NORTHEAST AND SOUTHEAST

N5ABF - Jerry Love	H: 677-1078
	W: 478-1212
WA9AFM - Thomas Webb	H: 631-6372
	W: 734-4284
N5ARV - June Allen	H: 632-1708
	W: 734-4391
N5CPN - Lee Swanson	H: 737-7776
	W: 734-6131
N5DCK - Bob Sikes	H: 737-5728
	W: 734-2223
N5DLD - Alvin Farrel	H: 677-6587
N5DWR - Chuck Jay	H: 732-6275
KA5ERL - Billy Mills	H: 672-3974
WD5EVP - Bob Allen	H: 632-1708
	W: 528-2381



Edmond Amateur Radio Club  
P.O. Box 75252 / Okla. City, Ok. 73147

Editor: STAN VAN NORT WB5UIY

The last business meeting was held at the General Electric Service Center on September 14, the second Monday, since Labor Day was on the first Monday.

The meeting was called to order by Pres. Stan Van Nort at 7:30PM. Old business was opened with the Technical Committee discussing their efforts for locating a new auxiliary receiver site. Martin Vinson advised he was working on a good location and almost had an agreement made until Labor Day weekend. About that time, he reported, some problems developed and the agreement was post-posed indefinitely. Martin said the proposal might have a chance again sometime next year (1982). Dennis Cruttt said KOPX radio station "might" move their transmitter off of the Channel 5 tower sometime next year. If they do, the TV tower will make a good receiver site. We currently have the 147.03 Mhz transmitter located there and it would be easy to combine the duplex operation. However, this is only a possibility-next year.

It therefore appears any solution is a year away from now. The problems with interference and poor receiver sensitivity will have to be tolerated. This has been the topic of meetings since March 1981 and there appears to be no simple answer. The President referred everything back to the Tech. Comm. until someone can develop another feasible and economical proposal.

New business was opened with the Pres. appointing 3 members to the 1982 Nominating Committee. The election of officers will be held at November meeting. The appointees are: 1) Mark Northcutt, chairman, 2) Glen Cochran, 3) Larry Dillard.

In other new business, Wendell Cochran requested a clarification of meeting times since we have been starting at 7:00 & 7:30 on different occasions.

Meeting adjourned.  
(It was noted that Larry Dillard was late again, and had some new EARC caps.)

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Your editor here received word from Calif. that former club member Rich Zanni & of course wife Abbey had a new baby boy. Born Sept. 6, 8:06AM, 8lbs & 6ozs. Kyle Christopher is his name and the parents are happy, proud, and bragging. Me and Mike Salem are still looking for a cigar to come in the mail soon...

Attendance has been low at the last few meetings, and now that summer is over there is no further excuse. Remember November 2 will be the next meeting and election of officers. If you prefer not to be nominated to an official office, you might think about being there. (Even the Stillwater boys are eligible for a position.)

The annual Chili Dinner held in December is approaching soon. If there are any suggestions bring them with you to the Nov. meeting. We will need volunteers for cooking up the masterpieces and extra goodies. Also any ideas for exchanging gag-gifts.

New address for Larry Dillard, WB5CWB, 308 Woodhollow Trail, Edmond, Ok. 73034

#### Attention Scanner Buffs

The OKC Police Dept. is changing the patrol districts around on Nov. 1 at 7:00am. Certain geographical areas are being patrolled under the new plan, by different briefing stations. The patrol districts are being made smaller and new ones added. I believe communications is also implementing new codes for advising officers of the nature of calls. Basic radio frequencies will remain the same.

If any one is interested, I might be able to reproduce the district map in the next issue. Call me on 63/03 sometime and if there is enough response, I'll see what can be done....

# AMATEUR RADIO EMERGENCY SERVICE



NET - 34/44, OKC, 9 pm. Mon.

In-Person-Meeting - 3rd Mondays, 7:30 pm.

ARES - Alphabetical (By Call Sign)

## LEVEL ONE - EC & ASSISTANTS

N5BEQ	- Jim Buswell	H: 236-0368
KA5CXW	- Fred Taylor	H: 528-1537 W: 734-2034
N5DBM	- Ken Stepp	H: 341-4874
WD5DYI	- Mark Northcutt Ext. 225	H: 755-4672 W: 478-1212
W5HXL	- Bob Ashby	H: 942-5375
WD5IRB	- Ralph Bartow	H: 521-8330
WA5JGU	- Charlie Green	H: 943-5631
AE5N	- Don Duck	H: 681-0133 W: 682-4622
WB5PWZ	- Bob White W: 521-2139 &	H: 681-9222 W: 521-2137
K5SJV	- Don Rooker Ext. 424	H: 721-2119 W: 789-5000
WB5TKG	- C.Y. Chandler	H: 232-9005
W5WZM	- Mac McClurg	H: 454-2381
WB5ZKZ	- Jack Muse	H: 691-1152 W: 521-2481

## CALLING COMMITTEE:

N5AWI	- Lesta Love	H: 677-1078
N5CTT	- Sue McGlynn Ext. 234	H: 722-3407 W: 789-5000
N5DWN	- Linda Brandt	H: 321-5081
KA5ERZ	- Connie Boland	H: 348-0123
KC5J	- Alwanda Clark	H: 789-3893

## SECTION ONE - SOUTHWEST

WD5FKF	- Reuben Castleberry	H: 691-1070
WD5NKC	- Arley Garvin	H: 681-0534
WD5NKD	- Patricia Garvin	H: 681-0534
WA5TDW	- Jim Lawson	H: 681-1150
WB5TDW	- Joe Ramage	H: 685-4814
WB5TMW	- Dick Baker	H: 685-2867 W: 278-2082

## SECTION TWO - NORTHWEST

N5AKQ	- William Foster	H: 354-0654 W: 789-3450
KA5AQY	- Buddy Kidd	H: 751-5094 W: 521-2671
N5AUE	- Terry Shoemake	H: 373-2474 W: 946-2150
N5AZO	- John Harazda	H: 354-5865 W: 427-8371
KB5BS	- Bill Skipper	H: 495-0051 W: 947-3361
WB5CNM	- Randy Williams	H: 789-7810 W: 848-8551
KC5CR	- Bruce Goff	H: 751-6276
WB5CTS	- Steve Hutcherson	H: 721-8064 W: 721-8064
W5DDE	- Bill Monroe	H: 943-4759 W: 235-6411
WD5DYJ	- Kay Northcutt	H: 755-4672 W: 525-4660
WD5EXY	- Bill McMullin	H: 842-7537 W: 781-3411
N5FM	- Frank McCollom	H: 751-3577 W: 947-6603
W1GOM	- Art Roberts	H: 947-5347 W: 525-8991

W5FLO	- Norm Wilson	H: 737-0258 W: 231-4607
W5FX	- Calvin Ladd	H: 732-2473
W5GNV	- Gary Knapple	H: 737-2962
KA5HDL	- Gerald Brophy	H: 672-9185 W: 6641
K5JB	- Joe Buswell	H: 732-0676 W: 329-8920
W5NBH	- Tiny Irwin	H: 677-1309
W5PDH	- Frank Arnold	H: 737-2582 W: 787-2702
WB5QPI	- Zack Zachry	H: 732-7255 W: 521-3651
WB5SVN	- Jack Iman	H: 677-8537 W: 686-2403

## SECTIONS 5, 6, 7, ETC.

### Edmond:

N5BUJ	- Bob McCoy	H: 348-2032 W: 751-4550
W5ERY	- Allen Watson	H: 341-4209 W: 341-2980
KA5ESA	- Bill Boland	H: 348-0123
WD5IDB	- Howard Wise	H: 341-2510 Shack: 341-4573
KB5RR	- Clarence Dollmeyer	H: 341-7163 W: 848-6631

### Choctaw:

KA5ALO	- Richard Edwards	H: 390-8297 W: 734-2450
N5BEV	- Bryan DeHart	H: 390-9319 W: 528-6467
K5EGQ	- D. L. Colburn	H: 390-8440
AB5H	- Frank Carter	H: 391-2187 W: 947-4442
WB5PNH	- Tony Holzman	H: 391-3398
K5VVD	- Larry Brewer	H: 390-8126 W: 734-9271

### Newcastle:

W5MPA	- Jim Fletcher	H: 387-4356
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### Norman:

N5GE	- Tom Childers	H: 321-8491 W: 942-8827
WB2HXX	- Jud Ahern	H: 364-0129 W: 325-3253

### Tuttle:

WB5IMT	- Dave Nelson	H: 381-3057 W: 232-6488
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KB5XN	- Jim Seals	H: 381-2005
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### Tecumseh:

K5LZF	- Bob Almand	H: 598-5148
WB5ZBA	- Earl Couch	H: 598-3212

### Calumet:

WA5FLT	- Joe Garland	H: 893-2660 W: 781-4394
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### Kingfisher:

WD5GLD	- Richard Ruhl	H: 375-4843 W: 375-5761
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### Guthrie:

WD5BMP	- Joe Couch	H: 282-4353
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### El Reno:

WA5UDK	- Eddie Lu Anderson	H: 262-5253
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WA5VTH	- Richard Anderson	H: 262-5253
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### Blackwell:

N5ANV	- Vernon Treiber	H: 363-0935
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# GREAT PLAINS A.R.C.

We had 13 members and guests present at our October meeting. The minutes of the last meeting were read and approved.

N5CCV Gerald had his directional mobil antenna with him and reported that the transmitter hunt at K0C10's picnic was a lot of fun and he's ready for another one! WB5EGZ Doug heartily agreed after some friendly teasing.

WD5DP Donna reported the Woodward library will gladly receive the set of books from ARRL. N5CCV Gerald also reported the Mooreland library would be happy to receive a set. The club will purchase a set for each library from ARRL.

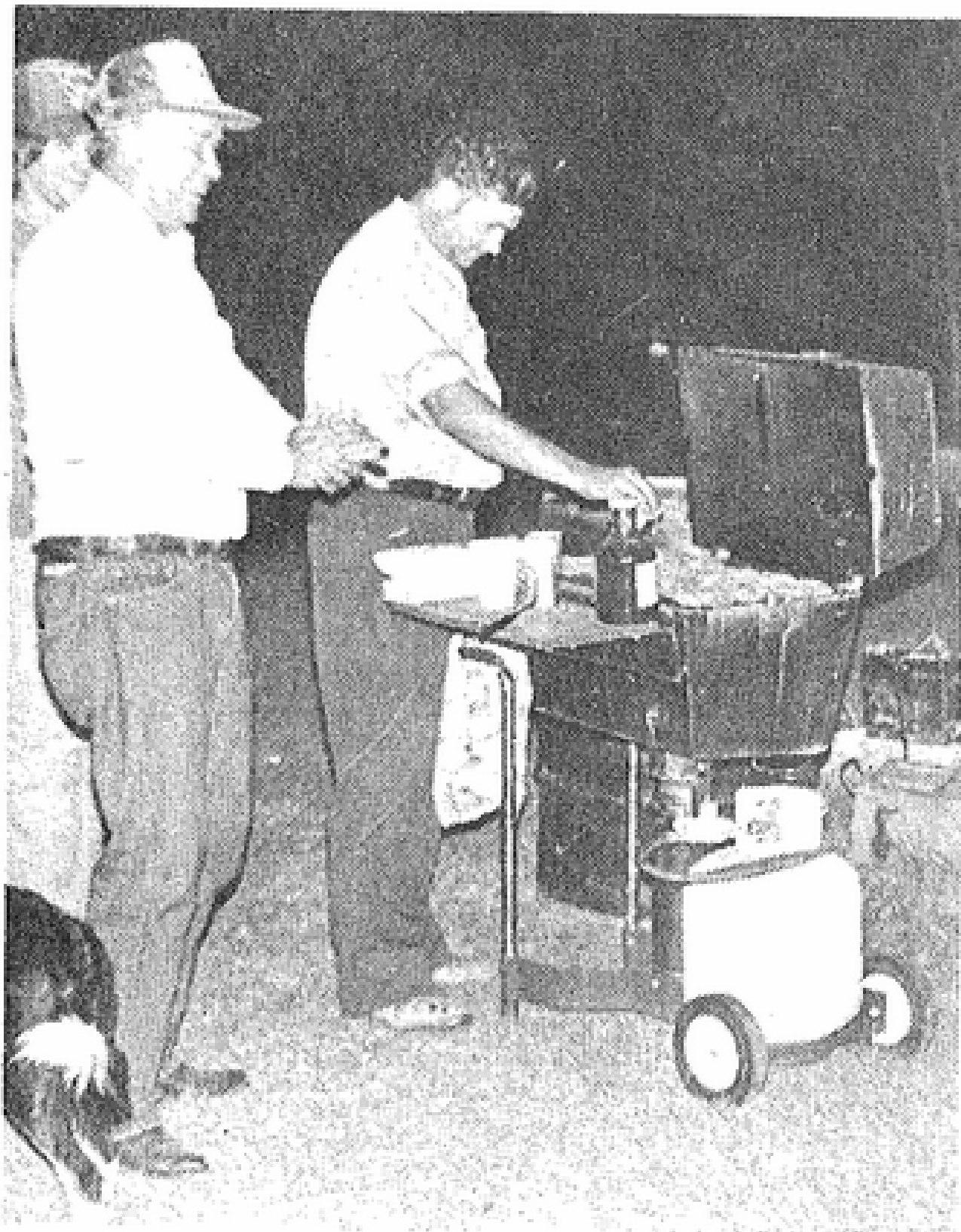
WB5EGZ Doug said that the court house will be closed November 3 due to an election. The club voted to hold our November meeting on the second Tuesday, November 10, instead.

The upgrade classes started October 8 at 7:00 P.M. N5CCV is in charge of the classes and is going to purchase code tapes from QST for use with the class. N5CPW Bill said he will be able to help on Tuesdays. Several others also have said they will be able to help as the class goes along.

Our club Christmas party will be December 12 at K-Bob's in Woodward. The club voted to add a 15% gratuity per meal to each ticket. Members and guests will be able to order from the menu. Mark your calendar for December 12 and come join us for an evening of fun!

September 20

We had a large gathering of Kansas and Oklahoma hams at K0C10 Larry and his XYL's Eleanor's covered dish picnic. And as I promised everyone had a real good time! N5CCV Gerald and his XYL Judy and their harmonies Tanny and Levi went up on Saturday as did WB0P3D Ron and his XYL WB0QW Carla. The kids played, the wives



Saturday Evening Cookout (Some Campfire!)



visted, and the men radioed. Then Saturday evening we went to the lake for barbecued hamburgers. K0C10 did the cooking with the rousing support of N5CCV and WB0P3D. The wives provided the rest of the cookout. I'll tell you folks, it was good! Those delicious burgers, a perfect evening by the lake, and lots of good companionship provided for an evening of fun. Then the troops started gathering Sunday morning. We got to meet a lot of people we talk to on the radio and the wives got to meet each other. Sunday afternoon we had a transmitter hunt that was lots of fun. K0C10 Larry and KA0K2K Nolan got Nolan's XYL Peggy to take them to a hay field and they hid among the bales. You should have seen those guys trying to hunt them down! N5CCV was all set for the hunt. He had rigged up a directional antenna to help pin point them. Finally, Gerald N5CCV, Doug WB5EGZ, Frank W0DSN, and Greg, son of K0C10's finally found them. It took 1 1/2 hours though. After a day fun and frolic came the highlight of the weekend. The picnic! Everyone gathered by the lake again. This time it was the wives turn to show their stuff. A covered dish table was set you wouldn't believe. When the "come and get it" call was given there was no need to give it twice! We had lots of people, lots of food, and lots of good old fashioned fun! After the meal N5CCV took his two children row boating on the lake. WB5EGZ Doug and his XYL Evelyn dug out the fishing gear and went fishing. They caught one but put him back. He said he was going to leave him so he could catch him next year! Others enjoyed the serenity of the evening visiting with new friends and old friends. Everyone had lots of fun and there's plans to have the same thing next year. If you missed this one you sure missed a lot of good old fashioned fun!

The photos were taken and contributed by Scott Ellis. Penny thanks Scott.

73 WB0QW

## HOLISTIC CHIROPRACTIC CLINIC



- NUTRITION/WEIGHT LOSS • DIGESTIVE DISTURBANCES
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laser trimmed resistors and didn't work worth a flip. They were also incredibly sensitive to RF, even in small dosages and never reached a very big market. The advent of the digital CMOS tone encoders such as the Motorola MC14410 quickly sent the Microsystems chip into oblivion. I still see one on my annual walking tour of the Dayton Flea Market, electronic dinosaurs in the vast wasteland.

The switched capacitor technique offers a considerable improvement over my previous presentation. It is a circuit technique that may allow the construction of those values of resistors needed on the microcircuit substrate to build those monolithic audio filters. Consider the following circuits:

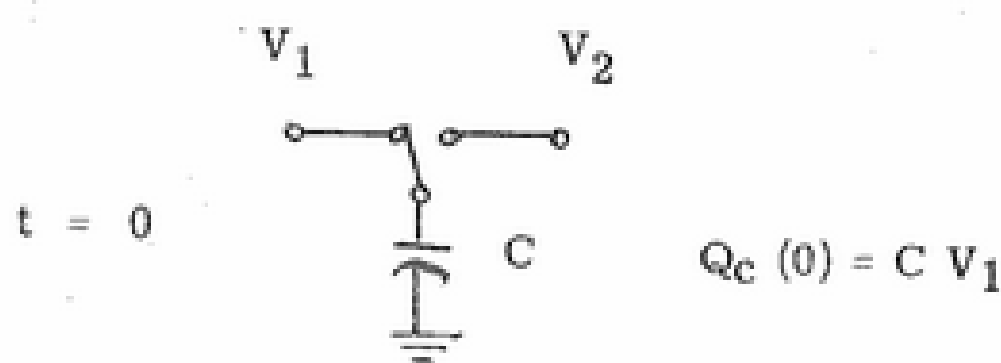


Figure 4A.

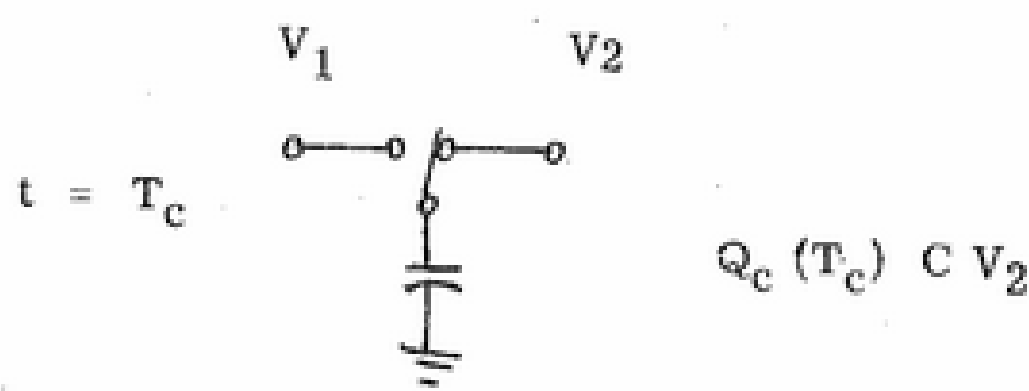


Figure 4B.

In Figure 4A, the switch is thrown to the left and the capacitor has voltage  $V_1$  across it. We know that the charge in the capacitor is given by the formula:

$$Q_c(0) = C V_1 \quad \text{Eq. 4}$$

In Figure 4B, the switch is thrown to the right and the capacitor has voltage  $V_2$  across it. We also know that the charge in the capacitor is now:

$$Q_c(T_c) = C V_2 \quad \text{Eq. 5}$$

Remember that these are steady state terms and if we assume that  $V_2$  is less than  $V_1$  then  $C$  will be discharging to  $V_2$  at  $T_c$ . Now as the capacitor is switched back and forth between the two voltages the amount of charge that flows in and out of the capacitor is the difference of the two charges:

$$Q_{\text{dif}} = C V_1 - C V_2 \quad \text{Eq. 6}$$

which is equivalent to

$$Q_{\text{dif}} = C (V_2 - V_1) \quad \text{Eq. 7}$$

Now assume that the switch will be thrown back and forth every  $T_c$  seconds, the current that flows into the capacitor will be

$$i = \frac{Q(0) - Q(T_c)}{T_c} \quad \text{Eq. 8}$$

which our previous equation 7 tells us will be

$$i = C \frac{V_2 - V_1}{T_c} \quad \text{Eq. 9}$$

and since frequency is the inverse of the period or

$$F_c = \frac{1}{T_c} \quad \text{Eq. 10}$$

we substitute into Equation 9 and get

$$i = C (V_2 - V_1) F_c \quad \text{Eq. 11}$$

Now we move  $(V_2 - V_1)$  to the left side of the equation and inverting both sides leaves us with

$$R_{\text{eq}} = \frac{(V_2 - V_1)}{i} = \frac{1}{C F_c} \quad \text{Eq. 13}$$

Notice the middle term of the equation is voltage over current which is resistance ( $E/i$ ) which we have defined as  $R_{\text{eq}}$ . Now what about sampling rate? Well, if setting the sampling rate below the frequency we are filtering is done, then we could have some sum and difference frequencies that could be produced which might cause aliasing or falsing. You must then add some external anti-falsing filters.

Ideally, the sampling frequency should be greater than twice the signal frequency. In this instance, the switched capacitors can then be considered direct replacements for a resistor of the value  $R_{\text{eq}} = 1 / F_c C$ .

Now notice that the term is free of any active devices and the equivalent gain and can be adjusted by setting the frequency. This means that tuning externally can be quite simple and just a matter of setting the clocks. A precise resistor value on the substrate may be hard to achieve, but it is generally easy to achieve the same value for equivalent resistors on the same substrate. The value of capacitors can be determined by photolithographic definition of their area. Since capacitance per area is uniform across an IC, a precision of 0.5% can be achieved by using standard MOS processing techniques.

In practicality, the switching is done with MOS switches and the circuit will look like this:

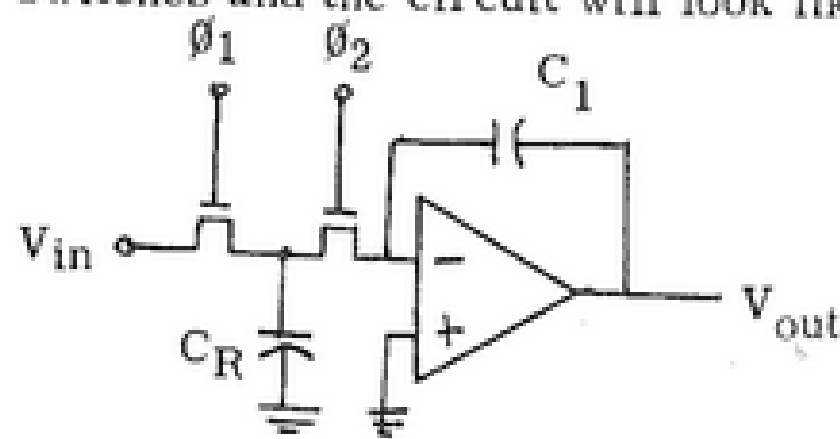


Figure 5.

The gain of the circuit is a function of  $C_1$  and, of course, will decrease as frequency is increased, thus forming a low pass filter. The two MOS switches switch between the input voltage and the feedback voltage.

The technique of switched capacitors will make monolithic chip filters available for audio frequencies at nominal costs compared to digital type filters. Tuning will be a snap. EG & G Reticon of Sunnyvale, California already has a series of general purpose monolithic filter for low-pass, high-pass, band-pass, and notch--at audio frequencies in 8 and 16 pin DIPs. Prices start at \$7.00 (got to buy about 10,000), but this is still a far cry from the audio touchtone filters sold by Rockwell, Mostek, and others using digital techniques. Touchtone decoding could get cheap very quickly, or a digital touchtone filter would benefit from a prefilter using switched capacitors. Even the digital filters have to have some type of prefiltering. This means that a complete touchtone decoder could be built with two (or maybe three) DIP packages, a considerable savings in space and components.

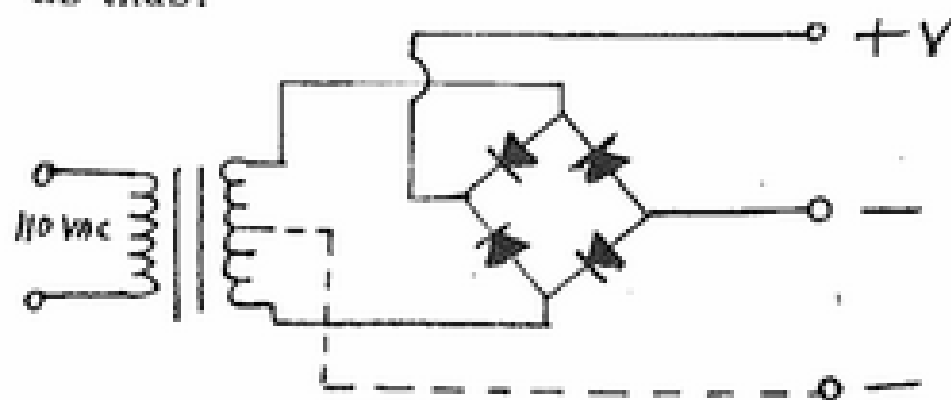
Other companies will probably get into the act. EG & G offers custom design facilities. I hope that one of the first applications will be to use the technique to build prefilters for the digital touchtone decoders. Audio active filters for CW could become quite small and a built in accessory to many radios. A definite boon to hamdom.

Micheal Salem N5MS

## BIG "D" MY OH YES, BIG RED, OH NO!

Nothing, with the exception of my annual trek to Dayton for the Hamvention is as carefully planned as the trip to Dallas for the OU-Texas football shootout. The last couple of years, it hasn't been much fun, footballwise, what with Texas and their darn defense. The trip, however, is very enjoyable. And last year, with my rebirth in interest in HF, WA5JXX and myself decided to spice the activity up with a little HF interlude. To that end, I decided to take a HW-8 (refugee from Stillwater and the fab collection of WB5YWO). It was unbelievable to see us outside the hotel on the 8th floor stringing wire dipoles on the fire escape. For some reason, we never got out with the low power. We also had a set screw come loose in the receiver tuning dial and I did not discover it until I got back. Funny why it seemed that all I had was interference all across the dial. JB never heard us and I, of course, never heard him because he was Khz away from our fixed frequency. I don't know why I told Roger what happened, he has never let me forget it. It was no sweat to him, I was the one who packed the boxes into the room.

Well this year was different. My HW-8 sojourn disaster was inspired at the last minute. This time I decided to put the TS-130 to the test and began casting around for an appropriate antenna and power supply. After counseling a little with JB over lunch I worked out a plan. The power supply for the radio would be easy since Joe had worked out the details after I gave him a nice 4 amp hour Nicad battery. Joe took the battery and put a 4 amp power supply across it and used it with great success in Colorado. Rather than hauling the power supply with me, I took one of my 4 amp nicads and went and did likewise. The power supply was obtained from WorldWide as a 24 Volt Standard **unregulated** supply which I converted to 12 volts by moving a lead from the bridge rectifier to the center tap of the transformer. I diagram as thus:



The dark lines is for the regular bridge rectifier and I moved the negative lead to the centertap of the transformer. It is still a full wave bridge but with half the voltage and only using two of the diodes of the bridge. Since the bridge was built to handle about 25 amps or so, the extra current is no big deal.

Floating this power supply across the Nicad worked very well. On my dry run the night before leaving I found that the supply would put about 1.5 amps into the battery. Since the receiver drew about .7 amps this means that the battery was charging at the rate of about 700 mils or so not too far off from the 10 charge rate of 400 mils. When I transmitted, the current from the power supply to the battery increased to about 2-3.5 amps depending upon how long the transmission was. There was very little change until I quit transmitting and then the current dropped off again to about 1.5 amps. I only hooked the battery up when using the radio, but I don't think that it would have hurt to leave the battery hooked for 4 or 5 hours. I think that the charge would have decreased also when the battery reached full charge since the voltage on a nicad elevates in the last 10% or so of its charge cycle.

Power supply was out of the way. What to do with the problem of finding an antenna? I considered a couple of solutions, but I wasn't eager to take my

HyGain Tape Doublet after all the trouble I had had the previous year. K5JB had a couple of good suggestions based on his vast (or should I say half-vast) experience. All were good, but I wanted something especially quick and dirty, especially since I didn't know what type of supports I would have for a dipole. As it was, they did not put me next to the fire escape this year. Maybe they remember last year.

For some time, I have been interested in some B & W antennas. I tried to get one of their new all band folded dipoles, but the cost was out of sight and most of the reviews I read were not so hot. B & W does have a small antenna called the Vacationeer, a small portable whip antenna designed for 2 to 40 meters. The maximum length that protrudes from the window is about 57 inches and is lightweight at 2 pounds. The Model 370-10 was about \$35.00 or so and I checked with Chuck to see if he had one in stock. Yep. I had to fake a trip to Oklahoma City to get the antenna. I opened the box and looked at the mess of aluminium and coils that I bought. Will this ever work? Maybe WAØNEV was right. I should have invested in a Hustler and a Vise Grip.

I gathered up the power supply, a key (fortunately for me), the microphone and a couple of small tools. I assembled the antenna the night before just in case there might be some missing parts.

The plan was to load up with Roger and his mother plus Bruce in the silver Volvo. I ignored the snide remarks about my packing materials (the basic cardboard box), but I did come up with a snappy case that I bought at Hamcom a year ago for the TS-130. I decided to take the TS-130 instead of the HW-8 so I would have SSB and a little higher power.

When we got to Dallas, I checked and demanded the highest altitude room they had available in the group of 10 rooms in our reservation list. I don't know whether they thought I was a potential suicide, but it must have worried them since they offered to come up and nail the windows shut. I declined since this would have put a real damper on the window mount antenna. I cleaned up and we all set out for our usual friday night before Dallas trip to the Swedish smorgborg. Boy, do I loved boiled shrimp. I thought that I would grow gills after my third helping and the banana pudding is a great way to top off the meal. They have over 50 items or so just on the salad bar alone. This of course does not take into account the roast beef, chicken, oysters and so on. Yumm.

Back to the room and I almost had to ask for porter service back upstairs for the stomach. It was at this time that I got seriously down to business putting up the antenna and stringing up the rig. It took about 15 minutes and I didn't have to spend a lot of time resonating the counterpoise since I had very cleverly brought along the Dentron, JR to handle those minor problems. I thought that JB might be around, so I gave him a call to fire up the old rig for a test. Rats, he's probably out drinking his usual quota of coffee. I went to sleep and left a wakeup call for 7:15 in the (ulp) a. m.

When I fired up the rig the next morning, the foreign broadcast stations were still in full swing. Our selected frequency of 7210 was smack dab in the middle of some gibberish. I called JB and started looking. Nothing. I finally tuned up to about 7120 Khz and heard a carrier tuning up. I stayed on and all of sudden here came JB like gangbusters. I hurriedly switched over to CW to try to tail end his transmission and moved myself a couple of Khz away. Joe kept trying and the next time he heard me right on top of a foreign broadcast station. He asked me

to QSY down about 1.0 KHz and he had me in the clear. We switched over to phone and carried on before Joe called Hoss WA5ZAI and for some reason Hoss called Keith WA8ZWJ and the net was off early. Hoss could hear me, but I was weak. Keith could not hear me, but I could hear everybody. Joe had me, but it was not that strong. We yakked for awhile before I had to go clean up to make an early start for the fair. I did manage to break back into the QSO after 8:45 a. m. or so to say hello to Fred W5NL and others.

The great gods of football had decided to televise the game, so kickoff was moved up to 11:50. I needed to be at the pressbox by 11:00 to do some work and had to bum a ride from our usual bus stop location to get there in time. I was standing there with a friend, Joann, Glenn WD5FVI and others when I asked Glenn my standard line, "Do the crosstown busses run all night?" To which everybody choruses in return, "Doo Dah, Doo Dah." Well, the crosstown busses were not running and if it had not been for a loyal OU ticket scalper who came by, I might still have been cooling my heels at that busstop. Our benefactor was from Muskogee (of course) and had recounted to us how he had sold 4 tickets on the 50 for \$175.00 apiece. Whew! Now that's inflation. Or private enterprise. When we got to the fairgrounds, it was amazing to see that nobody was selling tickets outside the cotton bowl since the City of Dallas had passed the antiscalping law this past year. All the ticket deals were apparently made far away from the Cotton Bowl to avoid the city's plainclothesmen trying to buy scalper's tickets.

Well, enough said about the game. Texas did get a real surprize from Arkansas the next week. I decided to cheer myself up with my annual candy state fair apple and corn on the cob. After those two items, I was ready to depart that vale of tears.

Back to the hotel room and I turned on the radio in time to hear some bible group in full swing. Goodness knows where JB might be, so I listened around before getting ready to go out to dinner.

The seafood restaurant was great and especially the Lobster Thermidor. I had to eat something to take the bad taste out of my mouth. We met some friends for dinner and our group of 15 or so kept a lively conversation, but nobody was allowed to discuss the football game. (oops, didn't want to mention it again.) A couple of people in the group wanted to come back to our hotel to see what the rooms were like and then we went up to Hank's room (Roger's brother) for our annual debriefing session.

I got up early again the next morning to see if I could catch WB5YWO and WA0NEV for their regular sunday morning sked. Sure enough, they were there and although I was a little weak from the Dallas QTH, I cried on their collective shoulders for a little while. Afterwards, I broke down the radio and went downstairs to meet everybody for breakfast. The trip back was with Roger's father and mother (Roger was suppose to head back early to make a connection so that Bruce could see his granny before she left town. I am sure that granny understood why he was in Dallas). I got in just in time to set the radio back up at the house and catch WB5YWO and WA0NEV for another schedule about 6:30 p. m. We yakked for awhile and then I was bushed. We made another schedule for 10:00 that evening and Jim and I discussed the football game finally. It is still a little painful.

So, what's next on the agenda? Probably Texoma if I can get away on Sunday morning. Not sure if I am up to missing the Colorado game (it could be a snoozer and if it is exciting, then I don't want to see it) and going down on Saturday. Probably ought to start making plans for Dayton and, oh yes, I need to call Roger about our reservations for Dallas again next

year. Might need to get a head start.

Micheal Salem N5MS

## POPULATION REPORT--AMATEUR RADIO STYLE

The August 1981 issue of Communications News lists the amateur population at 383,788 stations in service. There are 611 RACES stations and 9 Disaster stations. In the personal radio service, there are 14,873,977 Radio Control and CB stations. In the GMRS (General Mobile Radio Service) there are 18,990 stations.

They use to have a breakdown as to the types and numbers of licensees for the amateurs, but I didn't see it this time. Now I can remember when we only had about 200,000 amateurs. Still the growth hasn't even kept up with inflation. It does seem like that there are more amateurs in Norman, but that may be that they are more visible to me now.

Micheal Salem N5MS

## HYBRID TELEPHONE TRANSFORMER SUB (SLIC)

Well, now they've done it. While you and I have been struggling with those hybrid transformers all this time for the phone patch, Motorola has come up with an IC substitute. For the first time, a telephone subscriber channel unit without a hybrid transformer is a reality. The Motorola Subscriber Loop Interface Circuit (SLIC) is a very clever circuit that provides for 2 to 4 wire conversion plus suppression of longitudinal signals on the 2 wire input. All you have to add are two specially designed power darlington transistors (MJE270/271) and a transient suppressor (MDA220) to complete the (ahh) hookup.

Motorola calls this little darling the MC3419 SLIC and it is a complete Hybrid chip that replaces a hybrid transformer. Now that's not bad for a replacement for a generally very expensive transformer. There are Hook-status outputs and the circuit draws less than 5 Mw on-hook. Externally selected gain and current sensing outputs for off-hook status from both tip and ring leads are also featured. The price is roughly \$12.50 and they should be available now.



This chip should find a lot of use in amateur circles in homemade or commercial phone patches. The circuit doesn't look too difficult to add to the local repeater and with the proper rf bypassing could open a new world in subscriber interface. I'd like to get a couple and see what the phone patch characteristics are. More on this later, so watch this space.

By the way, Motorola includes this chip in a group of codec-based subscriber channel units (SCU, Motorola must talk in initials). The other devices in this system includes a CMOS 8 bit companding A-law or u-law PCM codec and a CMOS PCM filter with bandpass transmit and low pass receive filters on the same chip. They are all pretty slic.

Micheal Salem N5MS

## EDMOND AMATEUR

### RADIO SOCIETY 147.135/.735

September 20, 1981..20:14 Zulu.....  
The September meeting was called to order by our President, the inimitable Clarence Dollmeyer. Our Treasurer, Roger Harmon, has been on extended TDY, holding up the electronics end of the oil patch world, and in sorely missed...not only because he's a great guy, but he has the club check book!!! In view of this, it was decided that the President should also have the authority to sign checks in the Treasurer's absence. Hopefully, Clarence has been able to handle this item.

Membership cards are being completed and should be ready shortly..Clarence will fill you in on this. DUES....everything we purchase continues to go up in price and we are going to come up with a case of the shorts..therefore, at our next meeting there must be a vote on increasing the annual dues. How much??? From \$10.00 a year to ????. I think \$15.00 is a nice round figure..what do you think??? Your vote counts only when you are in attendance!

A presentation by Don Hooker, K5BJV, representing the Red Cross Emergency Service was made. Don pointed out that the primary duty of the Red Cross in this area was to provide food, shelter, and whatever else they can, to disaster victims when needed. The Red Cross can be contacted on a local basis on the 34-94 machine, which they will be operating in the event of any disaster.

Jim Eswell, Program Chairman, presented a film by the I. S. . . Company on "Computers", from beginning to space shuttle. It was very interesting and enjoyed by all. Pex Jim.

Radiological training...an eight hour course was completed by Bill Wright, W5GK, Martin Vinson, W5FBI, and Urs Truly..... another community service for EARS. The Director of Civil Defense for Edmond presented diplomas. In addition to our back-up communications system for Civil Defense Tornado Watch, the EARS now has three trained Radiation Monitors, equipped via the Civil Defense Department.

FOR SALE: 70' Rohn Tower with AR 22 Rotator, Control Box, 100' RGH, and Control Cable. \$250  
Call John K5QDR 6724089.

Repeater Update...Our repeater, now operating on 147.135/147.735, is working great! Was over on the transmitter site with Martin Vinson, W5FBI, our Trustie, and it looks fantastic. Full instrumentation on the unit. Martin will have our phone patch in operation soon. As I said previously, it will be an open patch, but will have to be brought up by a member.

As winter approaches, it is a gud time to check out all outside antennae. Better now than when it's cold, cold... snow on the ground, etc.

Little other news of note.

Very best 73's, K5AFN  
Bob

#### FOR SALE:

Fujitsu 450 mobil has P. L. tone pdg, mike, 1 and 10 watts, one crystal per channel. \$200.00, Ron Moore, 478-0049, K5DEW.

Heathkit HR 20 Rec and EX 20 Trans H. F. rig, 10 thru 30 meters, has power supply, mike, key, ant. tuner, vry gud condition. Ron Moore, 478-0049, K5DEW.

Kenwood TS520, 120v ac & 12v dc, 5 band transceiver, 250 Hz CW filter, wide-narrow CW switching. Call Clarence K85RR, 341-7163

Kenwood TS120S, 12v dc, 5 band transceiver, digital readout, mint condition. Call Clarence, K85RR, 341-7163

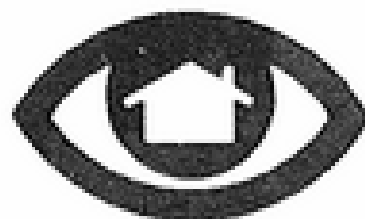
Heathkit Electronic Keyer, 5-35 wpm, 120v ac or 12v dc, sidetone. Call Clarence, K85RR, 341-7163

FOR SALE: ALPHA AMPLIFIER !!!! Alpha 374. Has three 8874 tubes, Hipersil transformer, and H.D. oil-filled cap. giving 3+ KW input. This is the "NO-TUNE-UP" model for instant QSY. Was totally gone thru at factory in June 1981, and is like new in every way. Call Henry at 722-3848. priced at \$1650.

For Sale: Two - 11 element Cushcraft 2-meter beams, with wiring harness and stacking kit. All for \$60.00. Will not split up. Chuck, K5NK, 721-4926, 721-6225.



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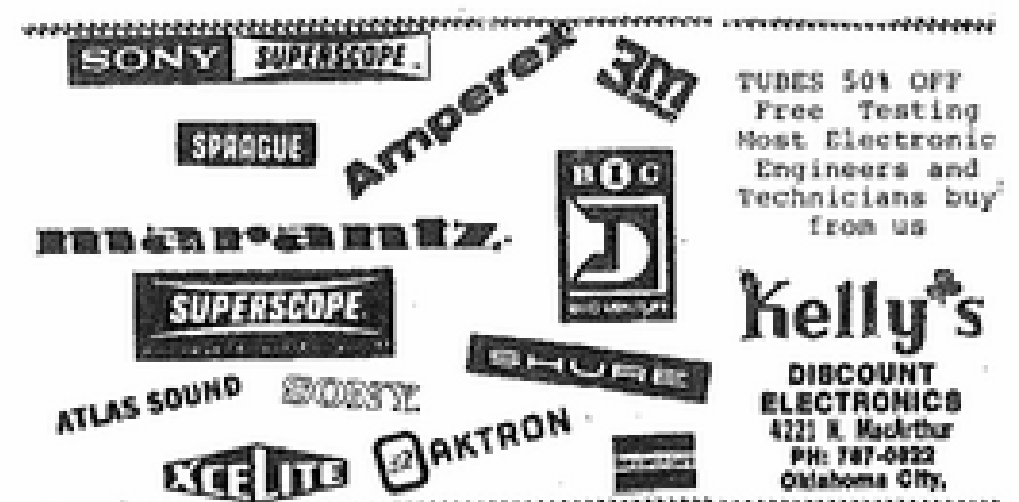
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# The South Canadian Amateur Radio Society

## THIS IS ONLY A TEST.....

Saturday morning, 6a.m., and it's my day off. I've got a thousand things planned for today. This is really too early to get up. Roll over and go back to sleep. What in the world are those kids doing already outside playing at this time of day? Where did they get the sledge hammer that they're using to beat on the side of the house? I'm going to destroy the "clacker" on that Big Wheel tricycle. Why did I think I'd be able to sleep this morning? Uh-oh, 8a.m. (yawn) already. I gotta get some coffee. Dog-gone-it, there goes the phone. Hello....there's what?....Oh geeez..... This morning?....I gotta get some coffee.... OK, I'll check into the net....good-bye. Where's my robe? What? Oh, sure honey, I remember. I'll get right on the garage as soon as the SET is over. Yeah, we might even be able to get one of the cars in the double garage this winter. You bet, I'll get the dead limb on the tree in the front yard right after I get the garage clean enough to find the tree saw. Open up the shack. Man, I've got a lot of stuff piled up in here. Turn on the rig. I've gotta get some coffee in a minute. Net control, this is WA5RPP checking into the net. Yes, I understand the situation is a downed jet plane, and that the two men aboard have bailed out safely. I also understand..."THIS IS ONLY A TEST". Did I remember to plug in the coffee pot? Who's at the door? You kids better not be ringing that doorbell. Oh, hi Jack. You aren't KU5B (WB5TZZ)? I see, you are a simulated downed airman from a simulated crashed plane. Sure, you can park your car in my driveway. As soon as they send out mobile units, they'll find you in short order and I can get some coffee. I remember..."THIS IS ONLY A TEST". Back to the rig. Yeah, the mobiles are closing in on the blue Toyota that is parked in my driveway simulating a downed airman. Now I can get my coffee, finally. I don't mind a Simulated Emergency Test, but I get a little cranky if I have to simulate the coffee too!

--WA5RPP

## SCARS BUSINESS.....

The South Canadian Amateur Radio Society held its regular monthly business meeting at the Norman Red Cross building on Oct 10th at 9a.m.

-K5KDR gave a report on the Christmas party. WB5UD has helped to complete the following arrangements:

Dinner will be held on Friday, Dec. 11th in the President's Dining Room of the Commons Restaurant in the OCCE complex on the OU campus. The dinner will be served at 7p.m. so we need to get there early for a little socializing.

The meal will be Chicken Kiev and all the goodies. There will be a door prize for the ladies, and the program will be announced later.

The cost will be \$9.00 per person, and reservations must be received NO LATER THAN DECEMBER 4th. Make checks payable to SCARS and send to:

Billy J. Oliver  
414 Westchester Circle  
Norman, Okla. 73069

-AF5X gave the report from the nominating committee. The following people have been nominated for the election to be held at the November meeting:

President	KU5B (ex-WB5TZZ)
	Jack Bickham
VP	K5KDR Bill Oliver
Treasurer	WB5UUX Chas. McCown
Sec.	AF5X Jess McKenzie
Reporter	WA5RPP Sam Barrett

Although the above have been nominated by the nominating committee, it should be noted that nominations may also be made from the floor. Election winners will take office in January.

-AF5X gave a report on the Cleveland County Simulated Emergency Test.

-- WA5RPP

## REPORT OF OCTOBER 27 C.O.R.A. MEETING

The following clubs were represented: ACARC, VHF, MORI, OCAPA, 76'ers, Wheatstraw.

This report is made especially for OU, Altus, Choctaw, Edmond Society, Shawnee, Edmond Club, Kay County, SCARS, Tri-City, Great Plains and Southeast Oklahoma Amateur radio clubs so they may know what is happening in their organization since there were no Directors to represent them and report to the next club meeting. Use this information, act on it and let your wishes in the matters be known - even if it has to be a letter to the President of CORA. Address: George Adkins, AD1S, Box 32735, Oklahoma City OK 73123.

At the November meeting the following change to the constitution will be voted on: Article 4, Sentence #4 now reads: "They shall be elected by a majority vote and shall hold office for a period of one year." If amended Sentence #4 to read: "They shall be elected by a majority vote and shall hold office, beginning on the first day of October, for a period of one year."

Two new policies were adopted for operation of the CORA Collector & Emitter.

### POLICY 1

If a club has other than Full, dues paying members, WITH A CALL, and only wish to have them listed in the rosters published in C&E, the club will pay an annual maintenance fee of \$1.00 per listing but will not be billed for that members subscription.

### POLICY 2

Effective 1 January 1982 all CORA clubs will:

- Submit copy to C&E for at least 9 of the 12 issues per year or be dropped from the Collector & Emitter mailing list.
- Buy a one page ad annually (currently \$30) OR a business card ad for one year. They can sell the space and get their money back. If more ads are sold their club can be credited with 25% of the sale.
- Submit constructive criticism or suggestions on C&E even if their Directors don't attend meetings.

Hopefully these will get more clubs to actually participate in the publication that they are paying for.

The rest of the meeting concerned preparation for HAM HOLIDAY (HH) '82.

HH Committee assignments were firmed up on the following:

ARRL Booth	Okla Central VHF
Prizes & Dealers	Okla City Autopatch
Facilities	Aeronautical Center ARC
Ladies	Mid-Oklahoma Repeater
PRE-Registration	76'ers ARC

(This year PRE-registration and DOOR registration to be separate. Need a club to handle the door registrations Saturday & Sunday.)

Volunteer clubs are needed for Programs, talk-in, Publicity and a few others which could easily be handled by some of the smaller clubs.

HH is to be held the last full weekend in July as usual, (23) - 24 - 25th. The ( )? There was a lot of discussion about abandoning the poorly attended Friday night operation in order to cut the facilities cost by some 33%.

Should HH have more than one class of admission? Family policy? Those eligible for prize

Continued on page 22



"It's 10 P.M., Daddy-O. Do you know where your grandchildren are?"

Two convicts were serving identical five-year sentences for armed robbery. In the prison yard on the day before their release, one of them said: "I have a proposition for you. One week from tomorrow, we'll hold up the First National Bank on Main Street." The other agreed and they proceeded to make their plans.

Fortunately, their plot was overheard by another prisoner who reported it to the warden. The bank holdup was a fiasco and the convicts were arrested on the spot.

Moral: Never end a sentence with a proposition.

While on one of the South Sea's lazy islands, a guest's hotel was ravaged by a hurricane. He went down to report to the manager.

"The bathroom is wrecked. The door is still standing, but the opposite wall has collapsed and the whole world can see in."

"Relax," said the manager without concern. "The door will be closed in front of you—and from the back, who's going to know you?"

"Traitor! Scoundrel! We've been dating for four years and now I find out you're married. Your wife is going to know about this!"

"Oh, don't be silly, Alice. My wife already knows I'm married."

Lost and Found advertisement: "To the party who shot the arrow into the air that fell to earth you know not where. I know where. Contact room 201, General Hospital."

His dog wouldn't behave, so he ordered it to go to obedience school. But the dog was so disobedient, it refused to go.



"Reach out, reach out and touch someone!"

At today's prices it's OK to cry over spilled milk.

We seem to be moving toward two extremes. The water in our pipes will be either dried up or frozen. That is a weather comment.

Idealism increases in direct proportion to one's distance from the problem.

If you think you're tops, you won't do much climbing.

Sergeant: "Stop worrying about the little sand in your soup. Did you join the Army to serve your country or to complain about the food?"

Recruit: "I joined the Army to serve my country, Sergeant—not to eat it."

Summer helper: "Working on a dairy farm can be monotonous; if it isn't one cow, it's an udder."

A couple bought an expensive motor home and traveled from state to state leisurely seeing the sights and trying the food specialties of each area.

They wrote their friend a letter that began: "Having such a great time, we decided to retire and enjoy spending our children's inheritance."

"Two ships collided at sea—one was carrying a cargo of red paint, the other, blue paint."

"Good heavens! What happened to the crews?"

"They were marooned."

Pseudonym: a nym that is not your real nym.

Mrs. Centipede to her husband: "We're going to have to mortgage the house again, dear. The children need shoes for school."



"There's a perfect example of the kind of metaphor I'm tired of."

Tactful person: one who comes to your house and makes you feel at home.

Young boy explaining why he wasn't putting money in his piggy bank: "It turns kids into misers and parents into bank robbers."

Matches are a good memory aid. If you hold a lighted one between your fingers, you'll quickly remember to let it go.

"Doctor, I have come to see you because I have the feeling that no one understands me."

"Oh, nonsense. What makes you think someone is persecuting you?"

"He was never happy about any thing. He was always so out of sorts that when he died and knocked on the Gates of Heaven, St. Peter greeted him with, 'Come in, but I'm sure you're not going to like it here.'"

## MORE C.O.R.A. REPORT

to pay full registration fee and those "just being there" or to "just visit the flea market" to pay a nominal or no fee. The question was asked, "Who pays the overhead for the "visitor"?"

A big item discussed was the rules for awarding of prizes.

- \* When a number is drawn should the prize be awarded even though the individual is not present? In that event the prize to:
  1. Mailed to him.
  2. Given to someone with written permission to pick it up and deliver to the winner
  3. If he isn't there, discard the ticket and draw another number.
- \* The Pre-Registration and Grand Prizes to be awarded to an absent winner and a letter be written to advise him of shipping costs involved in shipping to them and then await their remittance or instructions.
- \* No transmitting equipment to be awarded to an unlicensed person unless they are a member of the immediate family of a licensed amateur.

Consider all of the above and any other HH suggestions, etc., go to your next club meeting and help advise your CORA Director how to make HH '82 better. Joe Harding, WA5ZNF



"As long as you're going up to the attic, bring down a little nostalgia from the '30s or '40s."

## YOU CAN LEARN

# CPR

### Cardiopulmonary Resuscitation



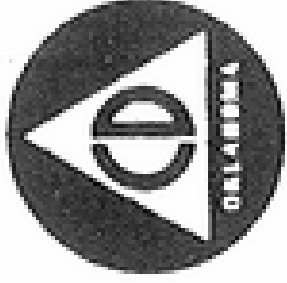
Contact your local Red Cross for information. Sign up for a course with hands-on practice.

✚ American Red Cross    📺 THE NBC TELEVISION STATIONS

CALL (405) 732-7121

for information as to how you can learn.

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*Les. High*





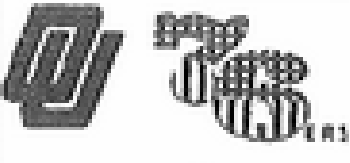



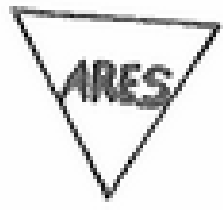
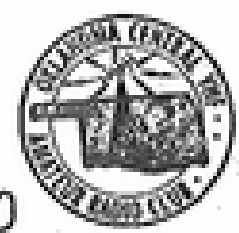



GOVERNOR

*Novis Price*

STATE CIVIL DEFENSE DIRECTOR



N A M H A P P E N I N G S REFER TO CLUB SECTION FOR SPECIFICS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 EARC - 7:30 PM ELECTION OF OFFICERS 	3 MORI  GP	4	5	6 	7
8 WHEATSTRAW ARC CALL MET 2:30	9 CHOCTAW ARC  USAF MARS OK DX	10  Shawnee	11 VETERANS DAY 	12 ALTUS AREA 	13	14 
15 EARS	16 ARES 	17 THE EDC SIGNAL ASSOCIATION, INC.	18 EDIT COUNCILOR EDITOR	19 kay	20 	21 Weiner Roast & Overnight Campout SEE PAGE 20
22	23	24 Shawnee Amateur Radio  C.O.R.A.	25	26 THANKSGIVING  	27	28
29	30	Let every man be swift to hear, slow to speak, slow to wrath. <small>JAMES 1:19</small>			NOVEMBER	

Can you wear

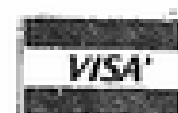
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