CENTRAL OKLAHOMA RADIO AMATEURS
# COLLECTOR AND EMITTER
50¢

VOLUME 11 APRIL 1985 NUMBER 123

The Wheatstraw club held our 25th Anniversary meeting on the 10th of March with over 70 people attending this memorable event. Many special quests were able to be with us and feast on the delicious dinner that was served and reminisce over the past 25 great years that the club has enjoyed. There were many old photographs that brought back memories to everyone that had a chance to look them over. I personally saw a photo of WA5GHK's radio room that was taken probally around 1965 that has always been very vivid in my memory and was my first exposure to Amateur Radio (wonder if Joe still remembers that contact to South America?). There were alot of newspaper articles about when the club was first formed and I expecially enjoyed reading the one with James K5RLM shown operating his station. Joe WA5FLT brought with him some of the various pieces of 6 meter am radio gear that was used by many back before 2 meters was a reality. I wish everyone reading this could have seen the cake that Goldie (XYL of WA5PFK) made for this event, it was magnificent and would rival many of the wedding cakes I have seen before. When Edgar WD5EGB gets his pictures developed I hope we can get a reprint of the cake and put it here in the C&E for everyone to see. After everyone had enjoyed the great food including the cake and ice cream the meeting was turned over to Johnnie K5GBN the program chairman who gave us a brief overview on how the club was first formed (see Feb C&E ) that really took a meaninful perspective with many of the original charter members present with us at the dinner. A few of those charter members not present, James K5RLM who is recovering from a stroke and Butch K5RMI who is on vacation in Texas, were sure missed by everyone. Margaret WA5RLP was in charge of the drawing for the door prizes and the winners were: KA5VCW's mother won the 2 meter amplifier; Ed WD5EGB won the food processor and Bob W5HXL won the 10 dollar gift certificate. After the drawings everyone enjoyed looking at the old photographs and newspaper clippings and looking over some of the original 6 meter gear and talking about the many caravans the club has been on in the past. Some of the special quests
that were present at the dinner were ND5N Dave Cox and his wife,K5WG Bill & XYL, W5REC Ray and his wife, WA5ZNF Joe & XYL, W5VCJ Steve and wife, K5VFR Houston & XYL N5BGD,and WA5HXL Bob & XYL,and the charter and lifetime Wheatstraw members.

This was an event that I feel everyone really enjoyed and was just a small expression of how close a group the Wheatstraw club is, there are not very many amateur radio groups that have continued to survive for 25 years of dedicated service to ourselves (the Ham community) or for public service such has the Wheatstraw club. A real fine group of people to work with and may God bless them all as we look forward to another 25 years.

## I N D E X  I N D E X



This is information pertaining to the April meeting, the club has decided to caravan to Mooreland on the 14th for the annual swapmeet & QSO gathering (thanks NR5L for the invite), listen in on the Wed. night net at 0830 local on 146.61 for more details.

I just about forgot this little passage but remember the cake at the 25th dinner? Well this is the secret recipe by the one and only chef herself Goldie Wilder:
a) 1-cup of love and 1/2 cup of kindness blend well.
b) 1-cup appreciation plus 3 cups pleasant companionship into which has been sifted 3 teaspoons of deserving praise.
c) Flavored with 1 teaspoon of carefully chosen words.
d) 1-cup of cheerfulness, a pinch of sorrow lightly folded in.
e) Net cost: Humbly evoke god's blessings, continue to support the Wheatstraw Amateur Radio Club.

### AMSAT News report

Amsat Oscar 10 is still performing flawlessly with many new users comming on line every day with the greatest interest just now developing in the USA as can be seen by the number of new area coordinators and the growing Amsat membership. Information about how good the satellite actually does work seems to be the hardest thing to explain; most amateurs still think that the satellites are only visible for a few minutes a day whereas Oscar 10 is visible up to 10 hours a day. There seems to be alot of interest here in Oklahoma and hopefully many of you are wanting try some REAL DX via this mode. I remember chating with Ed W5EOC who only lives about 30 air miles away through AO-10 one day and the path was 35,000km uplink and 35,000km downlink for a round trip of over 70,000km and about 1 second delay,not much for DX but it was fun.

The new operation schedule for Oscar 10 is now out and will be implemented on the 1st of April. The transponder times are as follows: MODE B ON= MA of 32 to 119..Mode L ON= MA of 120 to 137..Mode B ON= MA of 138 to 200...OFF= MA of 201 to 031..

The MA stands for Mean Anamoly count or the time where the satellite is in a particular orbit. Like taking a pie and cutting it into 256 slices,starting with 0 and going around clockwise to 255. Listen to the CW or RTTY bulletins to find the MA you are on. 145.810 with CW on the hour and 1/2 hour. The general rule of thumb is MA of 0=perigee and MA of 128= apogee.

The new operating schedule is a result of the summer sun angles on the solar panels and the best operating conditions thru the satellite will be in the next 3 months. Later in the late part of the summer (August) the satellite will be pointing off the center axis of the earth due to the eclipses and conditions will not be as favorable. Similar to last summer when the satellite favored stations looking to it from the east. All these changes in angles and operating times are to maintain the delicate temperature balance and battery load on the spacecraft.

Many people are wanting to know the best way to start building a receiving (SAT PACKET) station,which is a difficult decision to

## GOOD OLE DAZE

Reruns of previous C&E articles have been suggested. The article below was first published in the March, 1976 C&E on page 22, and fits into this series. See also the Good Ole Daze article on page 2 of January, 1985 C&E under "VHF".

MOBILE RADIO IN 1938. During summers in the late 30's my teenage friends and I would get together a lot and trade radio parts and work on our amateur equipment. We built and experimented all the time. One of our favorite activities was to conjure up some 5 meter equipment and set up an amateur station in one or two of the available cars.

A mobile installation was usually placed on the back seat and floor. A technician/operator sat in the middle. Around him was placed the various units. He was able to reach all the equipment. If someone yelled at him that something was wrong, or if he saw sparks or smoke, he went to work.

The equipment was modularized because we never did get all the stuff assembled into a unit. Besides, open like this, we could modify (or repair) it more easily. Our frequency was somewhere in the 5 meter (56 to 60) Mc band. All mobile units were home brew. One chassis was the RF section of the transmitter - a 5 meter self-controlled oscillator. The deluxe version might have a push-pull amplifier using a twin triode. We employed plate modulation using a pentode tube in a Heising circuit. We might get as much as 5 watts input to the oscillator or amplifier. The output would usually light a flashlight bulb. Other modules, sometimes on a pine board, were superregenerative receiver and the modulator. A slight circuit change in the one tube receiver would convert it to an oscillator. A carbon microphone connected to a 1 or 2 turn loop coupled to the coil provided modulation. This device was called a transceiver. Headphones provided further economy and explains why we were always yelling at each other. Also we needed to get enough modulation. One or both of our stations usually consisted of such a transceiver.

We didn't have push-to-talk, but there were several switches to accomplish the transition. Sometimes one of the changes between transmit and receive involved moving a wire from one point to another.

The antenna was quite often a wire that was mounted on a bamboo fishing pole. The wire might be used to pull the pole into a bow. Fastening the pole to a car was easy. The bumpers, horns, headlights, and door handles projected from the car several inches. Cords, light rope or another bamboo pole was used to brace the antenna in a generally vertical position. A vehicle so equipped attracted a lot of attention. Instead of a rubber duckie, we had a bamboo giraffe.

There were occasions when we could only transmit or receive in the vehicle, the one way transmission being completed at one of our houses. The mobile would take a test cruise - never over a few blocks, then return to the "fixed" station to compare results. I don't know why we called it fixed. Nothing ever seemed to be fixed. However, as I recall, the cars usually worked. I think that was because we just messed with the radio equipment, not the cars. On very rare occasions we had two mobile units working at the same time. This way everyone could go and we could also cover more territory. One car would follow a block or two behind the other. Keeping close together had several advantages. We could supplement the radio link with code on the horns and by sticking our heads out the windows and shouting replies, etc.

On one memorable tour we had two mobile units in a city park. We were unable to achieve two way via the radio equipment, so the circuit was completed by horn honking. Our experiment involved directional effects, so one car was driving around in tight circles on the park grass honking replies from the parked unit. We didn't give the fashionable neighborhood on the hill around the edge of the park much thought with all our horn honking, but when the police arrived on the scene, they reminded us of the desire for tranquillity. After the cops left, we discussed our neighbors. We decided they had grown accustomed to the lions roaring and the hyenas laughing, not to mention the aroma that came from the zoo located almost under their eaves.

The police were very nice to us. They heard us on their radio as they approached, but that was OK. They didn't look for guns, dope or liquor. Bright-eyed teenage boys who worked on radio equipment in 1938 just didn't mess with that stuff. We were asked to not honk or drive around on the grass, so we didn't.

I would often wish we had good receivers and powerful transmitters so that we might cover 2 or 3 miles, but I don't recall wanting the equipment all in one neat package because what fun would that be?

Bill, WA5RAQ

# THESE CORA MEMBER CLUBS PROMOTE AMATEUR RADIO

1 AERONAUTICAL CENTER ARC
MEETS: 7:30pm First Thursday Flight Standards Bldg., FAA, S. Macarthur

| | | | |
|---|---|---|---|
| PR | WB5SVN | Jack Iman | 677-8537 |
| VP | K5LDI | Tom Mangham | 677-5291 |
| Sec | WD5JPW | Gloria Seignious | 722-1740 |
| Tr | WA5CJG | Bob Pace | 376-3569 |
| EDITOR: Gloria Seignious, WD5JPW | | | 722-1740 |

2 OKLAHOMA CENTRAL VHF CLUB
MEETS: 10:00am Third Saturday. Red Cross. 10th & Hudson(Back door) Okla City.

| | | | |
|---|---|---|---|
| PR | KD5IS | Jerry Wetmore | 524-5080 |
| VP | N5PS | Pat Sherrill | 943-3219 |
| SE | K5JB | Joe Buswell | 732-0676 |
| TR | W5KE | Ellard Foster | 789-6702 |
| EDITOR: Joe Buswell, K5JB | | | 732-0676 |

3 MID-OKLAHOMA REPEATOR, Inc.
MEETS: 8:00pm 1st Tuesday Okla City State Civil Def. Will Rogers Bldg State Capitol

| | | | |
|---|---|---|---|
| PR | N5EPV | Bob Allen | Unlisted |
| VP | N5GRA | Bob Ganbel | 672-9294 |
| SE | N5HII | Elise Northern | 376-4287 |
| TR | W5KOZ | Sid Gerber | 737-1050 |
| EDITOR: Elise Northern, N5HII | | | 376-4287 |

4 OKLAHOMA CITY AUTOPATCH ASSOCIATION
MEETS: 7:30pm Third Tuesday. Okla City Fire Training Center. 800 N Portland

| | | | |
|---|---|---|---|
| PR | WB5NDO | Kathy Whited | 799-1457 |
| VP | N5GWZ | Bob Northern | 376-4287 |
| SE | N5DLM | Vicki Adkins | 722-6195 |
| TR | KE5M | Ron Recer | 341-7030 |
| EDITOR: Bob Northern, N5GWZ | | | 376-4287 |

5 OKLAHOMA UNIVERSITY AMATEUR RADIO CLUB
MEETS: 7:30pm Second Tuesday (Sep-May) 119 Wilson Center. 1334 S Jenkins

| | | | |
|---|---|---|---|
| PR | KA5BAY | Luke Noah | 325-1775 |
| VP | KE5N | John Wustenberg | 325-2382 |
| SE | KA5COI | Peter Richeson | 329-3217 |
| TR | KA5LZN | Greg Smith | 366-1641 |
| EDITOR: Greg Smith, KA5LZN | | | 366-1641 |

6 ALTUS AREA AMATEUR RADIO ASSOCIATION
MEETS: 7:30pm Second Thursday
North Main Fire Station (CD) Altus

| | | | |
|---|---|---|---|
| PR | WB5KRH | Dwight Dennis | 482-2498 |
| S/T | W5VXU | Mike Schenkle | 482-1797 |
| EDITOR: Mike Schenkle, W5VXU | | | 482-1797 |

7 BICENTENNIAL (76ers) ARC
MEETS: 7:00pm Second Tuesday. OG&E Bldg. SE 3rd & E. K. Gaylord Blvd.

| | | | |
|---|---|---|---|
| PR | AE5N | Donald Duck | 691-4199 |
| VP | WD5JNT | Ted Vanlaningham | 262-1675 |
| SE | N5AUH | Jerry Sproul | 354-2061 |
| TR | WA9AFM | Tom Webb | 737-671[illegible] |
| EDITOR: Jim Seals, KB5XN | | | 381-2005 |

9 WHEATSTRAW AMATEUR RADIO CLUB
MEETS: 2:30pm Second Sunday. Location varies. See club section.

| | | | |
|---|---|---|---|
| PR | WA5JHB | Marvin Stokes | 893-2221 |
| VP | N5EMD | Virginia Beneda | 825-3302 |
| S/T | K5GGL | George Maschino | 263-7614 |
| EDITOR: Richard Ruhle, WD5GLD | | | 375-4843 |

12 QUARTER CENTURY WIRELESS ASSOCIATION
MEETS: Quarterly at various places.
NET: 3855 kHz Sunday at 8:00 am.

| | | | |
|---|---|---|---|
| CHM | W5NL | Fred Boardman | 427-2505 |
| VCH | W5TY | Ray Long | 942-4314 |
| S/T | W5AS | Howard Baker | 721-5453 |
| EDITOR: Robert Runyon, AAØO | | | 373-1818 |

13 KAY COUNTY AMATEUR RADIO CLUB
MEETS: 7:00pm Third Thursday
Ponca City EOC

| | | | |
|---|---|---|---|
| PR | N5HIC | Paul Davis | 765-2227 |
| VP | WA5UBO | Marsh Pronneke | 363-2526 |
| S/T | KD5FX | Dave Land | 762-8616 |
| EDITOR: Dave Land, KD5FX | | | 762-8616 |

14 CIMMARON AMATEUR RADIO ASSOCIATION
MEETS: 7:00pm Second and Fourth Mondays. Place varies. See club section.

| | | | |
|---|---|---|---|
| PR | WB5Z | Jack Day | 227-3462 |
| VP | KA5DUO | Leo Peil | 886-2996 |
| ST | KA5SLY | Reeta Martin | 227-3013 |
| TR | N5FUH | Dede Bailey | |
| EDITOR: Ruth Simpson, N5FUR | | | 227-2791 |

15 SOUTH CANADIAN AMATEUR RADIO SOCIETY
MEETS: 9:30am Second Saturday. Red Cross Bldg., North OU Campus. Norman

| | | | |
|---|---|---|---|
| PR | KD5IT | Dave Egle | 321-7570 |
| VP | N5DEW | Ken Esadooah | 329-4667 |
| SE | KA5AXQ | Joe Green | 364-4301 |
| TR | WB5RXZ | Monte Bateman | 329-7485 |
| EDITOR: Sam Barrett, WA5RPP | | | 321-2601 |

16 EDMOND AMATEUR RADIO CLUB
MEETS: 7:00pm Second Monday See club section for location and type.

| | | | |
|---|---|---|---|
| PR | WD5DYI | Mark Northcutt | 755-4672 |
| VP | WA5EAI | Ron Cron | 681-0896 |
| S/T | WD5DYJ | Kay Northcutt | 755-4672 |
| EDITOR: Mark Northcutt, WD5DYI | | | 755-4672 |

18 GREAT PLAINS AMATEUR RADIO CLUB
MEETS: 7:30pm First Tuesday
Civil Defense room, Woodward courthouse.

| | | | |
|---|---|---|---|
| PR | NC5C | Gerry Ford | 256-5342 |
| VP | W5KFX | Lewis Patterson | 256-2111 |
| SE | KA5PYA | Lois Ford | 923-7683 |
| TR | N5EOX | Freida Patterson | 256-2111 |
| EDITOR: Lois Ford, KA5PYA | | | 923-7683 |

11 EDMOND AMATEUR RADIO SOCIETY
MEETS: Varies. See club section

| | | | |
|---|---|---|---|
| PR | N5DBM | Ken Stepp | 341-4874 |
| VP | K5SKA | Bill DeMand | 751-5137 |
| S/T | KC5GN | Bill Wright | 341-6076 |
| EDITOR: Bill DeMand, K5SKA | | | 751-5137 |

20 ARDMORE AMATEUR RADIO CLUB
MEETS: 7:45am Saturday. Corral Restaurant
INFORMAL: Every Wednesday. 221 9th NW

| | | | |
|---|---|---|---|
| PR | WD5FZD | John W. Merlyn | 223-9543 |
| VP | WA5IJA | Gene South | 223-8252 |
| SEC | W5JCX | jim Chilcoat | 226-6816 |
| TR | W5BLW | Charles Dibrell | 226-0589 |
| EDITOR: Glenn Hamilton, KE5ES | | | 226-4379 |

CENTRAL OKLAHOMA RADIO AMATEURS, Inc.
MEETS: 7:30pm Fourth Tuesday. Red Cross Bldg 10th & Hudson Okla City

| | | | |
|---|---|---|---|
| PR | WN5NWX | Reggy Whited | 799-1457 |
| VP | WD5ISS | Don Saunders | 751-0404 |
| SE | N5BEQ | Jim Buswell | 236-0368 |
| TR | WDOFTM | Linda Callison | 751-3620 |

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CENTRAL OKLAHOMA CHAPTER #63
CHARTERED MARCH 19,1973

QUARTER CENTURY WIRELESS ASS'N

FOREST PARK,Ok.(W5NL),21Mar'85:As alluded last month "Lookin9 forward to Word Processin9 & other uses."--usin9 a ComPuter, Disk Drive,some sort of Printer, and a Word Processin9 Pro9ram (WP). All four are now Present and will 9ive it a 900d try. The (WP) is labeled SPeedScriPt 3.0 and seems to have a lot of oPtions. One oPtion involves underlinin9, but unfortunately my Printer which is two years old will not accePt the command. The Printer is not 9uite first class as to letter 9uality but will do for the moment. Perchance will find a way to trade it for a better one,and of course there are birthdays,Christmas and other events. The (WP) system utilizes Line WraP which Produces an iirre9ular RT Mar9in, but for a Plus eliminates hyPenated words. Anyhow am enjoyin9 somethin9 new and the challen9e it brin9s. Now FIRST a telecon article from our Vice Chairman, Ray Lon9, W5TY!!!

!!!NEXT MEETIN9!!!

Second notice of our SPrin9 Quarterly Meetin9"; to convene Sunday, APril 14th, at the Anna Maude Cafeteria, Penn S9uare shoPPin9 center. Plenty of time for eatin9 & visitin9 ahead of Pro9ram to commence at 13:00 hours. Su99est comin9 early to avoid a Possible lom9 cafeteria line.

We believe all will enjoy the main Pro9ram-Planned/scheduled for the Jan. meetin9; time ran out due to a lot of business items!!. In advance think of "My most interestin9/unusual exPerience in Amateur Radio" (only one to a customer). EMBELLISH as much as you desire and feel free to brin9 e9uiPment and/or Photos as aPProPriate. Howard, W5AS Plans to record meetin9 info. for meetin9 minutes--so your choice to have your "ExPerience" recorded for Posterity. Lets make this a 9reat meetin9!!!

73 Ray, W5TY

Yesterday, a very real Pleasure to visit Father John McGinty, K5HMI at his QTH, St Frances Center. This was my first visit durin9 all these many years-also know that many of our members are fre9uent visitors. Shack Fax: His e9uiP. first class (Drake TR-7,Collins AmP.,Hal-RTTY,suPer Ant. sys). Also a mini-tour of St. Frances facilities, includin9 a 9reat communications center. Then also to break bread-Just haPPened to arrive at the ri9ht time-Tnx Father John. More Info: Father John will be 88 yrs. youn9 on Au9.10th. On APril 19th he will be honored for his 60th year since Ordination (APril 19, 1925). Father John, we are honored to have you as a very recent QCWA,Inc.,and ChaPt.63 member. John-Plan on a re-visit,"with camera" when I motor your way to Pick uP my/our Fed.& State Income Tax Return. Should be before the DEADLINE.

Trust you-the readers will not consider the follow in9 fool-ish to include in the APril C&E. My coPy of the QCWA NEWS, SPrin9'85 arrived on the 14th. Became interested in the "FUNTEST CONNECTION",headed by Harry Neben, W9QB. The sPecified deadline was Mar. 10th, but decided to send my answers anyway. If you are interested the 9uestions are on Pa9e 28.

(1) Ans. 6 (over)
(2) Ans. 155 MPH (SuPer Car)
(3) Ans. Basket Case
(4) Ans. Also Palendromic
(5) Ans. 21,978
(6) Ans. Yes

March 8,1985 a "Board of Directors" meetin9 convened @ 19:00 hours throu9h the courtesy of Hortense & Howard Baker, W5AS. A kind of humorous occurence just Preceedin9. Gene Nailon, K5DLE & myself had a9reed to meet at Morrison's Cafeteria (food exP.@ Quail SP. Mall-always 900d) located at MacArthur & NW Hwy. Arrived at site, only to find "No Morrison's"-all boarded uP and no si9n they had ever occuPied the buildin9. Both of us arrivin9 in seParate cars & nothin9 but traffic, never si9hted each other-even tho we talked to the same 9rocery sacker at Ska99s Alpha Ome9a/next bld9. west. The sacker told Gene it was across NW. Hwy on south side. Outcome: We did meet at Howard's, but a case in Point-2 Meter 9ear in my car may have solved the situation. Now Proceedin9:The follow in9 A9enda Items were covered-most of which will be covered at the APril 14 meetin9.

(1) Constitution & By-Laws: Written by Ralph Rea, W5AA (Chairman), Geor9e La9aly, W5NTL & Don Rooker, N05M. Some minor revisions. Plan a hand-out at APril 14 Meetin9.

(2) HAM HOLIDAY'85:ChaPt. 63 to handle ARRL Booth. Permission 9ranted to disPlay QCWA wares.

(3) QCWA,Inc.General Election: ChaPt. 63 to ParticiPate as TELLERS. We have a P.O. Box, but awaitin9 word from Ted Heithecker, W5EJ as to latest details from Board who met this month.

(4) Format-Sunday On-The-Air Meetin9: Most who read this will know we tried reverse (Z to A) roll call. Somethin9 of a consensus that most did not like it,but Plan to AIR it at the APril 14 Meetin9.

(5) Meetin9 Minutes: ResPonsiibility of Secretary. Howard concludes it is 9uite difficult with so much 9oin9 on & he may not aalways be tuned in. Plans to use a recorder and transcribe later.

(6) Collector & Emitter (C&E): How to invite/entice more article ParticiPation. What kind of articles do the members (at lar9e) desire. The NEWS EDITOR & assistants will be 9lad to take some via telecon wherein the Gist will be accurate or by hand written notes

(7) QCWA, Inc. ChaPter Manual: Very well written. We hoPe to find a way for all members to study this manual. PerhaPs we can have coPies available at HAM HOLIDAY '85.

CONTINUIN9:Somehow lost all of the above (locked in/on Disk), but fortunately had "Printed". Still have much to learn/exPeriment. This seems like a 900d Place to list our current "Board of Directors" and to reco9nize out9oin9 Directors (Jan.'85). Our si"cere thanks to Don Rooker,N05M and Robby Runyon,AA00 for your helP and exPertise the Past two years. Robby, we are anxiously awaitin9 your return as our exPert NEWS EDITOR.

Chairman-Fred Boardman,W5NL....1 Yr.
Vice Chm-Ray Lon9,W5TY.....1 Yr.
Sec/Treas-Howard Baker,W5AS....2 Yrs.
Dir-Geor9e Bunce,W5DKC.....1 Yr.
Dir-Sam Ste Phens,W5HZD.....1 Yr.
Dir-Gene Nailen,K5DLE.....2 Yrs.
Dir-Larry Watson,W5EIU.....2 Yrs.

To members, at lar9e:Your/Our elected Directors are our "Eyes & Ears". Please/ur9e desires and su99estions be made known to them-Hand written note or Telecon will do!!!.

By Telecon from Howard,W5AS:"Ur9e all members,when Possible, to check into the "QCWA World-Wide Radio Network" (SSB & CW). SSB net: Every Sunday,2000 UTC,14347 KHz,Ala W6FQ. Check-ins call by 9rouPs (1 thru 5); usin9 1st letter after your Prefix:
1-A to E; 2-F to J; 3-K to O; 4-P to T; 5-U to Z. For CW buffs (lots of fun),Every Wed.,0100 UTC, 7035 KHz Ala
W2JBL/W9CV. Same 9rouP Nos. may aPPly!!

73 Howard, W5AS

## MORE Q C W A

Was glad for reminder of QCWA QSO Party, 9-10 Mar. via Sunday On-The-Air Meeting. Only made 11 contacts, but they were very interesting. First one was W4YK, Bob, Hendersonville, NC. Bob was up to # 94 but took time out to call my Brother-also resident-and relate some important family news. Tnx. Bob. Sidelight-Heard W5OZE, Tom tell how to tenderize Ham with Coca Cola, but missed some of the details, Tom. Third contact was K4LMB, Ethel Smith. Ethel is candidate for VP this year-see QCWA NEWS. Most interesting-Ethel is currently a VP with the Washington Amateur Radio News Service-managed by "K0NL". Plan to write K0NL, formerly W3NL-Coincidence!!!.

By now may have overextended this submittal for April C&E. Will try again next month; provided this copy is readable in the C&E.

73 Fred, W5NL

## ACTIVITY REPORT

Chapter 63 QCWA on the air operations during February, 1985, as follows:

| | |
|---|---|
| Sessions | 4 |
| Check-ins | 157 |
| Traffic | 24 |

QCWA Birthdays for April, 1985:

| Date | Name | Call Sign |
|---|---|---|
| 3 | Hortense Baker | XYL-W5AS |
| 4 | Emma Hawkins | W5PWN |
| 7 | Ted Heithecker | W5EJ |
| 8 | Adele Peterson | XYL-W5QV |
| 10 | Bill Kyrick | NG5G |
| 11 | Frank Phillips | AB5J |
| 15 | Ivan Miller | W5HFU |
| 17 | Fred Boardman | W5NL |
| 26 | Howard Baker | W5AS |
| 27 | Doc Bowers | KX5W |
| 29 | Jon Cornelius | W5PHD |

Dear Mel:

Please put this in C & E. It is an item from QCWA Hotline Report. It might be that some members of the chapter can remember their CW well enough to use it. Hi!

For many years the QCWA CW-on-the-air meeting has been conducted by W2JBL and W9CV. If you haven't checked into that meeting, you should do so by all means. Propagation has been so poor recently that an alternate frequency of 3535 KHz has been tried. The meeting is scheduled for Wednesday evenings at 0100 GMT on 7035 KHz. If you can't hear them, try the 3535 frequency before giving up.

Howard - W5AS

Following is some additional info from Howard concerning his recent stay in the hospital:

Dear Mel:

Living with a diet gives ya some lumps sometimes.

During my hospital stay, the mid-watch nurse was a real doll - you know, the blonde hair and blue, blue eyeballs; about 115 lbs. and the 115 sure placed around where it looks best.

Now the hospital has a nice little coffee shop with goodies such as pop, ice cream, cookies and fruit. Of course all of this is free to patients.

About one AM I was starving, so I waddled down the hall to the coffee shop. Couldn't decide what kind of pop I wanted so I got one large Pepsi and one large Dr. Pepper. then there were decisions, decisions and more decisions as to the kind of ice cream I wanted. Couldn't decide so I got one strawberry, one chocolate and one vanilla. Then I grabbed lots of nice little cookies in plastic containers.

As I started out of the door, that little doll nurse was standing there with her feet apart and her arms and hands akimbo. Her eyeballs looked more like ice bergs now and not an inkling of a smile. "Are you going on a safari or is there a midnight party around here that I shouldn't know about, Mr. Baker." No mam, I'm just going to my room with a small snack, I replied. "Mr. Baker, you are stumbling so badly I'm afraid you'll fall and spill all your goodies. Here let me help you."

She promptly dumped my one Pepsi and one Dr. Pepper down the drain. Then she took my one strawberry, one chocolate and one vanilla ice cream and put 'em back in the refrigerator, and all my cookies she put back in the cookie basket. "Now, she sez, I will get you a snack and help you back to your room." She gave one very small cup of skim milk and one little plastic envelope containing two tiny graham crackers. Then she informs me that the slower I eat my snack the longer it will last. Yes mam, I sez.

I'm sure that lil nurse had an eyeball with my XYL, because now when I go out to the kitchen about one AM or so and get the refrig door half open, there is my XYL and faithful dog both giving me those icy stares. Oh, well! I'll just go back to the shack and see if there's any DX.

Anyway, I've lost 28 pounds of my flab but still very Hungry.

Howard - W5AS

We wish to remind our members that we need to begin giving serious thought to two projects that Chapter 63 has agreed to sponsor in the near future.

The first has to do with the ARRL booth at the Ham Holiday in late July. The officials of ARRL and the QCWA have given their sanction to our taking care of this booth. We will be furnished a nice, large banner and the national QCWA headquarters advises that they will furnish some goodies to be given out at that time. They are also in the process of preparing a new folder covering the operations of QCWA. It is going to take some 22 man hours of time to do this, so it would be well for us to start thinking about this now and decide how much time we can give to the project. Those willing to help, and we hope a goodly number of you are, please contact Tiny, W5NBH, who is heading the team to get the job done, and let him know how much time you would be willing to serve at the booth.

The other big project that the chapter has volunteered to do is the counting of the ballots for the National Election of Officers. We already have a P.O. box downtown about 4 blocks from the Red Cross headquarters on 10th street where we will operate at the times and dates as needed. Balloting will start about May 15th and the election will be closed on July 31 at midnight local time. And again, as in the case of the first project, it is time for us to start getting volunteers to help the chapter to do a good job of tallying all the ballots. We will need quite a few members for this task, so please decide if you can help and contact Fred or Howard as soon as possible. Certainly we want to do a good job on both of these assignments.

Howard - W5AS

We have only 17 choice 1985 membership cards still available. Will you please check your records and see if you are in line to receive one of these prestigious cards? If so, please be reminded that our dues still remain at the bargain rate of $5.00, and send your check to Howard Baker, W5AS, 5928 N. Redmond, Oklahoma City, Ok. 73122.

Please hurry and get yours while they last. We expect 'em to go fast. Howard - W5AS

P. R. O.  HAMFEST '85

Door Prizes! Dinner! Drawing! Exams!
Free Fleamarket Tables!
YL Prizes!
Coverd Dish Dinner! (Chicken & Sodas Supplied, Bring your own tableware) W5YI Volunteer Exams (Upgrade Only)

0900-1700 19 May Air Conditioned Admission: Hams $5.00 Extra Hams in family $1.00. Others Free

PITTSBURG Kansas Lincoln Center (West on K-126 Highway to US 69 Bypass (right) to 12th St, right past ball park, south to 9th St., right until you come to Lincoln Center)

::::::::::::

B O U L D E R  S P R I N G  H A M F E S T

.*SUNDAY MAY 5TH 9am - 2pm
Colorado National Guard Armory

$3.00 Donation - No extra charge to sellers
Round table Forum on Repeaters, Oscar Satellite, DX, Packet Radio Communications & a lot more.

**********

This is just a little note to remind you that CORA is putting on the VEC Exams each month, on the 4th Monday of each month at the Red Cross Bldg in Oklahoma City.
Remember the $4.00 fee. If you need more information just call Chuck Wilhite, K5NK at 721-4926.

Who has a DISK version of Colorcom for Joe Harding, WA5ZNF, Phone 737-1044?

MORE  Q C W

HOW DID CQ GET TO BE A GENERAL CALL?

In the December issue of AMATEUR RADIO there's an interesting article on the history of CQ. It seems that long before "wireless telegraphy" came about, English telegraph operators used the procedure signal CQ as a general call meaning: "All stations: A notification to all telegraph offices to receive a message." As many Marconi wireless operators were drawn from the ranks of wire operators, it was natural for them to carry over their long-time practice.

Early wireless operators found they needed a more distinctive signal for notifying distress; so the letter "D" was added.

Although the matter of an International Radio Distress signal was discussed at the Berlin Convention in August, 1903, none was adopted. However, at the Berlin 1906 Convention, Germany suggested SOE as the distress signal, as their operatcrs had been using this combination. Others objected, saying the final dit was too easily lost in atmospherics; so "S" was used instead. Note that then, as now, the signal was sent not as three letters but as one signal.

Which brings one to another point. A very high percent of new radiotelegraph operators insist on sending all prosigns, such as $\overline{AR}$, $\overline{SK}$, $\overline{BT}$, etc., as separate letters instead of just a single multi-element prosign.

W5JJ

FOR SALE: An accumulation of many, many years of RADIO COMMUNICATION. Excellent technical information, probably the best antenna information available anywhere. Make me an offer; I need the space! 789-3788, W5JJ

# EDMOND AMATEUR RADIO SOCIETY 147.735/147.135

We wish to thank KB0OU Cal. Calison for his excellant tenure through 1984 as our President. It was a very pleasant year and a great deal was accomplished with his leadership.
K2JVD John Lewis is a new member and is retired from the AWACS program at Tinker Field. We welcome his expertise in Civil Defense matters.
W5ERY came up with a suggestion about using an old T.V. set yoke core to prevent T.V.I. On the cable systems where you experience this problem you simply wrap the cable to the TV receiver three or four times around the old core and then reattach it to the TV receiver. Also you can include the A.C. line to the receiver but, it should be wound in the opposite direction. You should of course have removed the old yoke windings from the original yoke.
Our Civil Defense Van was at the fire that lasted several days at Tinker Field. It showed it's superior design by being able to coordinate most of the other volunteer fire fighting units so they were able to work together efficiently. The design and capability of the radio gear is due to the efforts of Martin Vinson WA5FEI. Thanks Martin for an ecellant job.
The show put on by Larry Mooney on Tornadoes was excellant this was a special meeting on Friday March the 15 and consisted of slides and two movies. You cann't see enough of these presentations as you seem to learn more about them every time you attend a spotters session like this.
Harold WA5ZKX is the new telephone coordinator and when required will call persons who have four names on a list to call and in this way all members will be notified of meetings and emergencies.
On March 3 we had our first weather watch and in the interum a few trailors were damamged north of Edmond. So far we have really been fortunate as we have had light weather events in our general area for a several years so unfortuneatly we are due for some severe weatherin this area.
Our Ham classes started this last meeting at the E.O.C. on Sunday March 17. Our teacher is just that a real live teacher who is KA5VEK Amber Thomason and her husband KA0CVK Bob Thomason. We will have about 15 students according to my count and we will find out from them as to how they are progressing next time.
The repeater is doing just fine but, will change it's frequency to 147.735 input and 147.135 output to comply with A.R.R.L. suggested splits and to get rid of an interference problem. Bob N5BUJ has the repeater in excellant condition as proven by a Spectrum Analyzer which was recently repaired and calibrated.
March the 23rd is still a target date for the Simulated Emergency Test. More on this next month.
Kay Janda is now our Dinner Coordinator and when she finds out what our preferences are she will let us know by phone where we will be on Friday April 19.

K5SKA Bill

# GREAT PLAINS A.R.C.

WSHGH Repeater 146. 13/73

Believe it or not, the Great Plains Amateur Radio Club met on the right day of the month this time--March 5th with twenty-two members and guests present. That was a very good turn out, but we would love to see even more. We had a final reading of the Club Constitution and By-Laws by Rod, WB5OVT. There was no discussion, so apparently everyone approved. James, W5HLJ, is doing an outstanding job in preparing the club roster. It's a time consuming and confusing job, but I feel safe in saying that we all appreciate the work he is putting into it. Thank you James.

My apologies to David Rogers, KA5VAY, our newest member. It seems as though, in the last article I somehow misquoted his name as Don. I knew better, but guess my pencil slipped or something like that. My mistake regarding David and later response leads me to believe that at least a few people are reading this article. Hi, Hi.

We are getting into full swing preparing for the upcoming Eyeball QSO and VE Testing to be held April 14th at Mooreland, Ok. We hope to have a good turn out this year with a new dealer or so participating. Everyone please make your plans now to attend this event.

Doug Haupin, WB5ZGZ, Woodward County Civil Defense Director, mentioned tornado Awarness Week and added that the National Weather Service's Storm Spotters meeting would be held at 7:30 p.m. on April 8th at the Woodward Public Works Building for all interested amateurs in this area.

N.W.O.O.S.W?

"Northwest Ok. Operation Storm Watch"

Along with the thawing of the ground, the greening of the grass and the budding of the trees, comes the outburst of the Ok. thunderstorms and twisters. Ahhh Spring!!!! The glorious colors and the music of the animals and wee creatures that are abundant are a sight and sound to behold. But, as along comes the good, alas "Here comes de bad!" Mother nature in all her glory! Northwest Oklahoma and parts of Southern Kansas, better known to the National Weather Service as "No Man's Land", is beginning to get into full swing preparing for the coming of her ill tempered child. The man at the top of the storm watch system in our area is Bill Wyatt, KD5JR, Severe Storms Co-ordinator. He reminds and beckons the surrounding area towns law enforcement officers, Ham Radio Operators other local radio communications systems personnel and Civil Defense Directors to keep one ear tuned to the calling of the storm net. The Great Plains Amateur Radio Club works closely with the radar site in spotting the storms and furnishing the much needed communications from one site to another which is all intertwined to comprise the watch network. The dedication and forthright time consuming concern of our local amateurs, as a branch of this storm watch system is certainly an interesting topic to explore. As now a part of this intriguing organization I am very proud to put forth my small part in behalf of these conscientious few who work along side of and with these other organizations who serve so many in their own way. Long hours, upsetting of daily schedules and middle of the nite callings is no stranger to these hams. Getting oneself prepared in the ways of knowledge and equipment preparation is no small matter also. There are spotters watch seminars to attend and equipment to be serviced and made ready to travel at a moments notice.



AERONAUTICAL CENTER AMATEUR RADIO CLUB, INC.

W5PAA

MINUTES OF MARCH MEETING

The meeting was called to order by President, Jack, WB5SVN, at 1930 hours local time. There were 28 members and guests present.

Following self introductions, Tom, K5LDI gave the CORA report.

Jack gave the treasurers report, and announced plans to buy a new linear for the repeater since the old one was very trouble prone.

While our Treasurer is tied up, members are requested to mail their dues ($5) to ACARC, Postal Station 19, OKC 73169.

The April program on Satellite Communication will be presented by K3TGY, Bill Brody.

A fine program on Radiation was presented by Carl Drumeller, W5JJ.

Adjurned for Coffee and Donuts at 2048 hours.

W5HKL/Temp.Sec.

FOR SALE: 30' Airstream Travel Trailer, Roadready, $6800. Hugh Benson, KA5DGY, 946-0033 4428 N.W. 45.


So when a cloud of dust, a whirl of wind and a mighty bolt of lightning invades the boundaries of this territory, the Great Plains Amateur Radio Club comes out from their secret hiding and strives to protect the unknowing and innocent lives of their surrounding towns and neighbors. Return with us now to those thrilling days of yesteryear when without the aid of the Woodward Severe Storm Center these hams were called upon, equipped with only radio and their natural instincts in spoting severe weather. Now with their faithful Companion Bill, they are even more prepared to serve and protect the once unreachable area in our great Northwest.

73,
Lois, KA5PYA

P.S. Thanks to the RACES for their seminars in our area.

LORZ ATTENTION!

The 4th Annual Great Plains Amateur Radio Club Eyeball QSO and Swapmeet will again be held at Mooreland, Oklahoma, Sunday, April 14, 1985. The doors will open at 9 a.m. and VE Testing will commence at 9:30 a.m. To insure that all can be tested, please forward 610 forms 30 days prior to the test date. Further information is available from Gordon Richmond, NR5L, Rt. 1, Box 12, Mooreland, Oklahoma 73852 phone (405)994-5394 or from Gerald Bowman, N5CCV, Box 356, Mooreland, Oklahoma 73852, phone (405)994-5453. If you haven't attended this event previously, make your plans now and allow us to show you some Northwest Oklahoma Hospitality.

With this, I will bring to a close another episode of the G.P.A.R.C. News. So Long and see you next month (a warmer one, I hope).

73
Lois, KA5PYA

Club
NEWS
VILOV

## Minutes of March Meeting

Meeting was called to order at 9:05 A.M. by President Jerry, KD5IS, with nine members present.

Ellard, W5KE, gave the Treasurer's report and CORA report. It was decided that the Club would be willing to provide talk-in service for Ham Holiday. There was some discussion on how it should be done and the CORA rep was asked to volunteer us to the HH committee.

The group was brought up to date on RACES and ARES activities as well as severe weather spotting and reporting. There was also discussion on 20 kHz channel spacing for 2 Meter repeaters.

Meeting was adjourned at 10:58 A.M. for coffee and donuts. Joe, K5JB, Sec'y

## New Gizmos Dept.

March 1985 Electronics Products contained a couple of interesting notes on new products that pertain to telephone communications.

Teletone Corp., P.O. Box 657, Kirkland WA 98033, announced two new integrated circuits, one that generates and one that detects telephone call progress tones. The M-981 generator produces dial busy, audible ringing, reorder, and other tones at 350, 400, 440, 480, 620, 941, and 1209 Hz. Harmonics are down -35 dB. It uses a 3.58 MHz crystal and runs off of 5 Volts. It comes in a 14 pin dual inline package. Cost is $6.00 in thousand quantities.

The M-982 call progress tone detector detects dial, busy, audible ringing, and station busy tones. It has tri state outputs to indicate 350, 440, 480, and 620 Hz. It is CMOS, uses a 3.58 MHz crystal time base, runs on 5 Volts and comes in a 22 pin DIP. It runs $14.50 each in quantity.

As you can guess, the tone detector is meant for a smart telephone dialer, one that can redial a call that goes astray. I suppose the tone generator is for the phone freak who wants to build something that will trick the guy who built the smart dialer with the other IC, I dunno...

Cermetek Microelectronics Inc., Sunnyvale, CA, announced a Bell 212A compatable modem module intended for mounting inside a terminal, computer, or other equipment. The CH1770 costs $99 in quantity and connects to virtually any UART via two to eight TTL level RS-232C (that is a contradiction) lines and to a telephone line via an RJ11C modular jack.

It sends and receives data at 110, 300 and 1,200 b/s and supports both pulse and tone dialing and either manual dialing from a telephone instrument or automatic dialing from a keyboard.

When sending data, the modem's speed and parity scheme are under host control. When receiving data, it adjusts to the speed and parity of the calling device and informs the host of these parameters. The module retains the last number called for automatic redial. It also has built-in line impairment diagnostics, analog loop-back test capability and loss of carrier detection.

The module measures 2.54 in high by 3.74 in wide by 0.75 in deep. It requires plus and minus 5 Volts. You can buy these things, put them in pretty boxes and go into competition with Hayes. Joe, K5JB

## Onward and Upward - A transmitter Project

For those of you who have the pioneering spirit and like to experiment with the frontiers of technology, this month's project describes an easily constructed transmitter that operates in the electromagnetic spectrum well above UHF. In fact, it exceeds even the frequencies generally associated with microwave. We will get more into the details of it's frequency characteristics later but, in general, most of it's energy is located between 200 and 500 THz (Tera Hertz, or ten to the twelfth power Hz, or from 1500 down to 600 nano meters, if you are more comfortable with wavelength). It is relatively simple, most of its parts are readily available and those that are not available can be substituted without much performance degradation.

One of the real charms of this project is the economy of parts. In this day, it is not unusual for an exotic component to become available but to be quoted a heavy duty price, in production quantities, yet! Only those with the nerve to ask for and receive engineering samples get an opportunity to experiment with the latest state of the art.

The key element necessary for this transmitter is a Unode, a vacuum tube that functions by direct emission from its single element. All that is necessary to build a transmitter using one of these things is to create a circuit with a suitable power supply providing current of sufficient magnitude to raise the Unode's active element to such a state that direct emission, at the desired frequency, is started. Since it is desirable to be able to use this equipment in a portable environment, and the output frequency is critically dependent on supply voltage, more effort was expended in developing a suitable power supply than any other single part of the circuit.

In my case, with a fairly well stocked junk box, it was simple to select Ni-Cd cells suitable for the application. Since exact junkbox duplication is unlikely, substitutions were found and are included later in the article.

The battery was required to be able to supply 3.8 Volts at 1.3 Amps for a reasonable amount of time. Fortunately, I happen to have a ten year old battery pack out of an Aerotron portable rig that contained several Ni-Cd cells. The cells were 1.4 Amp-Hr which would be sufficient for an hour's operation and three of them in series would be very close to the 3.8 V requirement. With this discovery it was beginning to look like the Unode was made for just such a battery configuration. Carbon Zinc cells would have been a tad high in voltage if three were used and a tad low if two were used. It is doubtful their performance would have been acceptable anyway with the high current requirements. The problem of parts mounting and enclosing was also solved by the junk box. The battery cells happened to be 2/3 C size so three of them were as long as a battery of two C size cells. A old flashlight housing configured for two C size cells was discovered and pressed into service.

It was also fortunate that the Unode had a similar mounting arrangement to an ordinary flashlight bulb and could be mounted in the socket provided. The only precaution was to keep from touching the Unode's outer envelope with bare fingers. Body oils, according to the industry literature, if left on the Unode's quartz envelope will cause it to weaken at the elevated temperature it normally runs. Just to be sure, the envelope was carefully wiped off with non-scented toilet tissue before the first test run.

In order to control the radiation pattern of the transmitter techniques similar to those used at microwave frequencies were used. The flashlight's bulb reflector was close enough to a parabola that it was simply placed so its focal point and the Unode's emitter coincided.

Since the Unode is a direct radiation device it was unnecessary to do any impedance matching to get effective coupling with the ether.

This was to be a very elementary transmitter, the thought being that if it worked at all the modulation methods could developed later. Good old A1 emission would be sufficient for test purposes. Also by using simple modulation methods, the receiver system might be likewise a simple device capable of detecting presence and absence of radiation from the Unode.

Before firing up the transmitter, being rather conservative, I dug deeper into the junk box to seek some method for detecting and measuring the radiation output. The Unode only cost about $5.00 but I didn't want to ruin it by being careless with its operating limitations. Again, I was fortunate to discover an instrument made by the Poloroid Land Co. that was an accessory to its early model cameras. It consisted of a selenium detector wired in series with a sensitive ammeter. Selenium has the rather useful property of being sensitive to electromagnetic energy in the general region expected from the test transmitter. When bombarded with sufficient energy it generates a current that can be detected with the associated ammeter.

This is a fairly broad spectrum transmitter (sorta like spread spectrum, only different). According to the data sheet, The radiated energy peaks at the frequency of 300 THz. Since power is down 3 dB at 200 and 500 THz it appears the unmodified emitter Q of the Unode is 1.0. This is pretty low but since band occupancy is not a problem, no particular effort to restrict the band width was tried. The data sheet gives methods for filtering the output which were simple enough but at greatly reduced total power output. It hardly seemed worth the trouble.

Once the Unode transmitter was fired up, it was noted that there was a much simpler way than using the selenium instrument to detect radiation from the Unode. That part of the spectrum between 400 and 857 THz is visible to the unaided eye. Reception of the signals transmitted from the Unode are as simple as looking for them. Since the energy peak is at 300 THz, visual detection is not the most efficient but its ready availability certainly offsets its inefficency.

After a closer inspection of the industry literature I gained a better understanding of what I was observing. Much of the research and design that went into the Unode was intended to increase efficiency in the 400 to 857 THz region. Of course! This is our visual reception region. Had the thing been optimized for frequencies lower than 400 THz, an observer would have had to use heat receptors to detect the radiation and they are not nearly as sensitive as our visual receptors. The second way to increase a communication system's efficiency is to increase the sensitivity of the receiver. (This is JB's second law. JB's first law is "If they can't hear you, you can't work 'em.)

The R & D people on this little hummer were respecting JB's first law as well. The peculiar design of the Unode permits it to transmit more power than ordinary designs. It transmits almost five watts as compared to plain vanalla designs which typically only transmit 1.5 watts. This is only a 5.2 dB improvement which falls short of the expansion to JB's first law ("If it don't increase the power at least 10 dB, don't mess with it.) However, the peculiar physics of a Unode give this increased power more apparent effectiveness because of increased efficiencey in the visual spectrum. The particular problem caused by attempts to push this type of performance is catastrophic failure of the Unode's element. In the Unode I was testing, the vacuum in its envelope had been tainted with a small amount of impurity designed to help correct this problem. It used to be common in the industry to use a halide, like Iodine, to capture molecules boiling off the emitter and keep them from depositing on the envelope. They would just keep flying around in the vacuum until they redeposited on the emitter replacing molecules that were flying off. The result was an emitter that could be operated at a higher temperature without degenerated life. The Unode under test may have some of this stuff in it but it was advertised to contain an impurity called Krypton. For all I know, this stuff don't do nothing but was suggested by the Advertising department so engineers could make the connection with Superman's home planet and be subliminally persuaded to try the things. After all, Iodine really doesn't do much for the pizzaz of a product, you know what I mean?

Several operational tests were run on the Unode equipped transmitter. Since there wasn't anybody equipped with a suitable receiver handy, I depended on detection of reflected signals in my experiments. It was quickly discovered that signal to noise ratio was important. At the band of frequencies used, propagation doesn't seem to be effected by time of day but the noise level is very high during the day. My most satisfactory operation was at night. This is just as well because I have to work during the day and don't really have time to do serious experimentation.

Various types of reflectors were tried. Almost anything worked, even dust in the air. The transmitter, when directed skyward would cause radiation to be scattered from dust particles back to the observer, me. In the rain, the results were spectacular. The radiation pattern was very visible. A life long wish to be able to see an electromagnetic field was satisfied! The most effective reflector was the big red stop sign about 150 meters distant. I am convinced that an observer stationed over twice that distance would have no trouble distinguishing the signal from this transmitter. Further tests will have to be run to establish its actual performance in daytime, high noise conditions.

Well, let's get down to part's specifics. The particular Unode I used was Black and Decker Part No. 93-601. They have come a long way haven't they? I found it in the Venture store but I suspect it would found about anywhere Black and Decker things are sold. Unfortunately, I left my notes at work but from memory there were Unodes available from other sources that operate at 3 Volts and 6 Volts. The former is an awkward voltage if NiCd batteries were to be used but the latter has possibilities. Five NiCd cells would have a nominal voltage of 6.25 volts when hot but would quickly drop under load to the proper voltage. At an assumed current of 1.3 Amps, this little fella would develop 7.8 watts which is a miserly increase over the 3.8 Volt version but looks good compared to the 1.5 Watt plain vanalla Unode.

The problem of battery substitution was solved by brousing through the General Electric Nickel Cadmium Battery Handbook and the Trice Industrial Products Master Catalog. There was no direct substitution for the cells I used (Manufactured by Marathon Battery Co.) but there were some interesting sizes of cells that might be quite a bit better for the application.

For example, the 1/2 size "D" cell, G.E. Part No. GCW2.0ST is the right diameter to fit in a "D" size flashlight housing. It is 1.465 inches long so three of them would be about 0.4 inch short to fit in a two cell flashlight but this could be easily shimmed up. This GE cell is 2 Ampere-hour rated so it would be better than my junk box version. The Gould type 2.2SCL cell, shown in the Trice catalog, is 2.2 Ampere-hours and 1.488 inches long. This would make three of them about 0.34

inches short in the two cell flashlight. Again, a little shimming would fix that. Gould has a three cell battery using these cells and its Type number is CS603. Now, that would look real professional as compared to the crummy way I taped mine together.

Also, there is an interesting combination that might work with the 6.0 Volt Unode. The Gould type CS605 is 5 half size D cells with a length of 7.347 inches. This is about 0.15 inches longer than 3 "D" cells. There ought to be enough spring collapse left in a particular three cell flashlight to permit us to cram another 0.15 inches into the thing. When the battery is freshly charged, it might be a bit hot for the Unode but under "Amateur Intermittent Service" there shouldn't be any serious problem. Besides we are expected to exceed the manufacturers specifications by a little bit. Vacuum tubes are forgiving.

In conclusion, it seems like the tradeoff in receiver ready availability more than offsets the slight lack of efficiency for the spectrum of this type of transmitter, making a transmitter receiving system of this design quite practical. There are limitations, of course since the radiation is line of sight but that didn't stop microwave and radar. The real charm of this technology is the relatively low cost of parts. Anyone can enjoy the thrill of discovery without breaking the bank. Joe, K5JB

## Power Supply Grounding

In last month's C&E, N5MS related a problem he tracked down that he thought was caused by a leaking capacitor in a power supply. He was getting a shock when he brushed past the chassis of his good, old frequency counter. His circuit reminded me of a "shocking" observation I made once that has made me aware of the need to be careful about arrangement of power line bypassing in circuits I constructed. The problem is a hot chassis and possibly malfunctioning circuitry if care is not taken to be aware of the peculiarity of power wiring.

See Figure 1 for an illustration of a typical 120 Volt, transformer type power supply circuit. For the sake of description I am using electricians terms "Hot", "Neutral" and "Ground" to refer to three wires in a typical 120 Volt AC house wiring circuit. Neutral is at ground voltage potential at the house's power panel. Ground is the safety ground that is at the same potential of the power panel if it is properly grounded to earth ground. It is not supposed to be connected to Neutral anywhere else in the wiring circuit. The safety ground is supposed to provide a current path to earth ground in case of an equipment fault within a grounded housing. This "fault current" is supposed to trip a circuit breaker or blow a fuse and remove the voltage from the Hot wire. The Hot wire is supposed to have black insulation, the Neutral have white, and the Ground have green. Don't bet your life on the white/black deal though! In fact, don't trust the ability of an electrician to recognize green either.

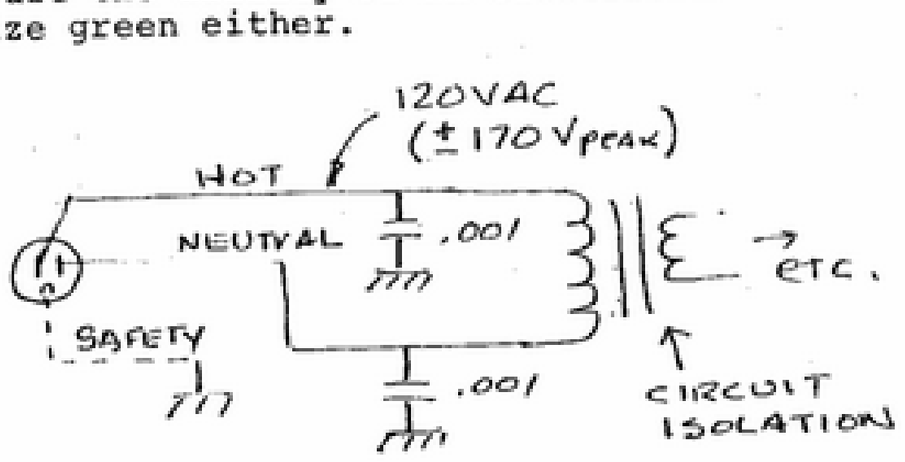


Figure 1...The Circuit

House power is an example of an unbalanced circuit (as compared to a circuit that is balanced with respect to ground, like TV twin lead). One wire is supposed to be at ground potential (neglecting I times R voltage drop) and the other wire's voltage swings, in the case of a 120 VAC circuit, from plus 170 Volts to minus 170 volts, at the rate of 60 complete cycles per second. In our figure, the wire that is swinging through this range is the Hot wire. Now, examine C1 and C2 which were placed on each leg of the incoming power to shunt high frequency currents, either from external or internal sources, to the chassis in an attempt to keep external and internal things from interfering with each other.

Assume for a minute that the safety ground wire, shown dashed, does not exist and that there are no other ground paths from the chassis. This is particularly easy to assume with a transformer circuit because the primary and secondary windings generally perform a pretty good job of doing this isolation and older equipment was not provided with the built in safety ground wire. These two capacitors act like a voltage divider. If the values of these two capacitors are equal, the voltage at their junction will be half of the value of the hot wire, or plus 85 to minus 85 volts. (This converts to 60 Volts RMS, of course.)

This is enough voltage to feel. With the two .001 uF capacitors between the hot wire and chassis shown in Mike's diagram, there can be 90 Micro Amps between the chassis and ground (assuming you have significantly lower impedance than the capacitor from neutral to the chassis). I tried it with a capacitor and it is enough to feel, though it is not uncomfortable. When .005 uF was substituted, the current began to take on a bite!

The only way to correct this condition is to ground the equipment chassis. The capacitors were put in the thing for a purpose so it is unwise to remove them. If one of the capacitors does decide to go belly up, as Mike suspects, the equipment fuse (it does have one doesn't it?) will blow and then the flakey capacitor can be replaced. Joe, K5JB

## Latest ARRL Skinny

Here are a couple of things of interest from the March 14 ARRL letter followed by a cutting from the March 13 ARRL Gateway, the packet radio newsletter:

NEW BANDS DOCKET DELAYED

Responding to a Petition filed by Corwin Moore of the Personal Radio Steering Group, the FCC extended the reply comment deadline in PR Docket 84-960 to March 12. 84-960 is the proposal to allocate spectrum at 10, 24 and 902 MHz to the Amateur Service.

The unfortunate result is that the Private Radio Bureau staff will not complete its work on 84-960, including the 24 MHz allocation, in late March or early April as expected; the whole thing will be set back probably to mid-May. Another two or three weeks may ensue in getting the matter onto the FCC agenda.

FCC ADOPTS RF EXPOSURE RULES

The FCC has amended its environmental rules to provide for evaluation of human exposure to RF radiation. This action was taken in response to General Docket 79-144, and is something the ARRL Committee on the Bio-Effects of RF Energy has been working for over the last six years.

So far the only information available is an FCC New Release dated March 13. The ARRL Letter and QST will carry details as soon as the full report is available. According to the News Release, the new rule will apply to radio and television broadcast stations, experimental broadcast stations and low-power TV stations, transmitting satellite-earth stations, and experimental radio stations.

It also has been proposed to exempt other FCC regulated telecommunications facilities and operations. Exemptions from this rule

would be made because of a lack of evidence that these services would affect the environment significantly with respect to human exposure to RF radiation. ARRL is already on record as having requested that Amateur Radio be exempted, but it is too early to speculate whether it might be one of the services "categorically excluded" from the rule.

(end of ARRL letter. The following came from the March 13 Gateway.)

PACSAT MEETING

I had the good fortune to attend the design meeting for PACSAT held recently in Rosslyn, Virginia. At this meeting, representatives of AMSAT, the Volunteers In Technical Assistance (VITA) and NASA discussed the details of PACSAT funding, design and construction.

The most important issue discussed at the meeting was funding. Like all amateur satellites, PACSAT will be inexpensive, but sources of major funding will still have to be identified. PACSAT represents a unique opportunity for funding organizations to take part in a technological experiment that is also a social experiment; PACSAT, if successful, will prove that low-orbit data-communications satellites can be used to coordinate development and relief efforts in Third-world countries. Of course, PACSAT will also increase the utility of amateur packet radio by providing world-wide packet forwarding. If your group would like to contribute to PACSAT, or if you can help identify sources of major funding, contact

Dr. Gary Garriott
VITA PACSAT Project Officer
1815 North Lynn Street
Arlington, VA 22209.

After discussing funding, the group concentrated on technical considerations. Operators will see PACSAT as a packet bulletin board system (PBBS) in low-earth orbit. The PBBS will have somewhere between 2 and 4 megabytes of memory, and you will be able to access the satellite with an AX.25 TNC and some special radio/modems. This is all relatively straightforward, when compared to other aspects of PACSAT's design. AMSAT and VITA hope to have PACSAT launched as a Getaway Special (GAS) payload on the space shuttle. Such a launch places complex constraints on PACSAT's size, shape, propulsion system and construction. PACSAT must fit in a standard "GAS can" which is only 19 inches in diameter and 20 inches tall. Fitting several megabytes of memory, spacecraft controllers, transmitters, receivers, batteries, and a propulsion system into less than 5 cubic feet will be quite a job. To protect the shuttle and its crew, PACSAT will have to go through safety and construction tests more complex than AMSAT has ever confronted. The successful construction, launch and operation of PACSAT will depend on and demonstrate the best that Amateur Radio has to offer. That this is also a packet-radio project makes it of interest to all Gateway readers.

Ed. (Jeff Ward, K8KA)

(End of Gateway exerpt...K5JB)

Ten Years - Sigh!

I had not realized that the CORA Collector and Emitter was ten years old until I got the last issue. Seems like only yesterday, heh, heh!

A lot of people have been involved in making the thing the successful rag that it is, Of course, without Joe, WA5ZNF, It probably would have never flown. We would still be putting out a dozen or so newsletters, memographed and mailed at $.22 each. Another stalwart who has kept the thing practical is Bob, WB5NSV, who has kept the address lists current with his computer expertise.

Bill, WA5RAQ, has always been watching over us and creating the annual indices that make it easy to find that issue that contained whatever-it-was we are looking for.

From the beginning it has been successful because it was a team effort. The content has always been a little less than professional looking because of the independence of the individual contributors. If we had submitted manuscripts and had the material typeset it would have had a polish second to none. However, some of the fun has been the competition between each other to try and have good looking copy in the thing.

Its ancestor, the Aeronautical Center Amateur Radio Club's Collector and Emitter, under Carl, W5JJ's editing, was a professional looking newsletter that was nationally recognized as a model of its type. We were all proud to have such a fine document represent our area.

My first contributions to the CORA C&E were done on an old Model 19 Teletype machine, shortly followed by an "Old Underwood" electric telegrapher's typewriter that only printed in upper case. My first real milestone was when I acquired a Selectric II, had it tuned up by Jim, WD5HPU, and for the first time could throw away the "white out"!

But progress continued. I obtained an Apple computer and a good word processor program and production became a simple matter of fumbling with the keyboard and reorganizing my thoughts electronically. The old Selectric was swapped to Tom, WA5TSJ, for one that he had modified with the Escon kit of solenoids and a serial interface box capable of connection to the Apple.

Having electronic means of composing C&E materials opened up another possibility too. It was now feasible to collect material from others and merge it in with the column. On occasion, I was also able to receive text from someone who didn't have printing capability and could run it off for them. (The Selectric prints at about 13 characters per second so it is more like a "strolling" than "running" it off.) The most exciting event of this nature was when Jim, KB5XN, sent me the 76'ers text via packet radio. One other contributor, Richard, WD5GLD, in Kingfisher has packet capability but we have yet to transfer his column. We needed to try it this month because he had trouble dumping it to the COCONET at machine speeds and had to resort to the mail, tsk, tsk!

Joe, WA5ZNF, has been working up the capability to receive material electronically and maybe one of these days we will be able to smoke his printer!

I even heard rumbles that the typewriter king (Mike, N5MS, with an IBM Executive) is thinking about getting one of the Big Blue boxes with a Hewlett Packard Laser Jet printer! He is even a worse hold out than I when it comes to computers. I hate to see the neighborhood go like this but they say we have to work smarter, not harder, to keep up, HI!

Hmm, I need to talk to him about getting a modem and a communication program for that thing...maybe we will be able to smoke his new printer with all this stuff!

Here's to the next ten years! Keep those articles coming! Joe, K5JB

For Sale or Trade

Azden 300 Talkie, good condition. Includes external microphone, charger, 16 button keypad and provisions for PL. Will work on MARS offsets. $200 firm, or will trade for TAPR TNC board. Contact Larry Conner, WA7UIB, (405) 872-5828, Noble OK, or on 146.70 daily.

THE BROKEN ARROW AND TULSA AMATEUR RADIO CLUBS ARE PROUD TO PRESENT

# 1985 GREEN COUNTRY HAMFEST

## *and Family Mini-Vacation*

ARRL SANCTIONED

**where:** Western Hills Lodge 6 miles east of Wagoner, OK in Sequoyah State Park ( off Highway 51)

**when:** Saturday, May 25, 9:00 a.m. to 5:00 p.m.
Sunday, May 26, 9:00 a.m. until Noon
(Doors open at 7:00 a.m. Saturday for Dealer and Swap table setup)

**admission:** $3.00 at the door or $2.50 with pre-registration. Includes both days. Sunday only $1.00.

**table space:** $10.00 at the door if available and includes one admission or $7.00 with pre-registration.

## FEATURES

Dealer Displays and Flea Market -- all indoors

Programs featuring Ham and Non-ham topics

Pre-registration prize and a Special Ladies' prize

Special Drawing for Yaesu FT-757 (Tickets $2.00 each or three for $5.00)

Continuous "Funny Money" -- coupons usable as cash at swap tables -- drawings both days.

Amateur License Testing (See back)

Snack Bar at Flea Market with reasonably priced sandwiches

Horseback riding, boating, fishing and camping in Sequoyah State Park (See back)

Color coordination by Mary Kay / Fashion Show & Tea by Bee Line Fashions ($1 Fee)

Lake Shore dinner Saturday night

---------- CUT HERE TO MAIL ----------

Mail to: Broken Arrow Amateur Radio Club, P.O. Box 552, Broken Arrow, OK 74012

NAME _____ CALL _____

ADDRESS _____ PHONE _____

PRE-REGISTRATION AND GENERAL ADMISSION - BOTH DAYS @ $2.50 . . . . _____

___ ADULT DINNERS @ $7.00, and ___ CHILDS(Under 12) @ $3.50 . . . _____

___ Entries for Yaesu FT-757 drawing ($2 each; 3 for $5) . . . . _____

___ 6-foot of table space @ $7 each, includes both day's admission for one person; Sunday only $2.50 . . . . . _____

___ Fashion Tea @ $1.00 each . . . . . _____

TOTAL AMOUNT OF CHECK -- please don't send cash . . . . . _____

## CONFIRMED DEALERS

Radio, Inc. Industrial Electronics Since 1935

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Betty Loyd CANDIES

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## AMATEUR LICENSE TESTING

- Examinations will be given for Novice thru Amateur Extra Class
- Attendance at Hamfest not required for admission to testing
- Testing Sessions begin at 9:30 and 12:30, Saturday only; Advance reservation advised; walk-ins welcome on first-come, first-served basis
- Send completed 610 and $4.00 check made payable to ARRL/VEC to WB5OSM, 11671 E. 80th St. North, Apt. "BB", Owasso, OK 74055

## ACCOMMODATIONS

Western Hills Lodge, a unique resort with dining, swimming, fishing and many other recreational opportunities the whole family will enjoy.

- Rooms are available in the Lodge for Friday, Saturday, or both nights. You must mention that you are attending the Hamfest to get a single-night reservation.
- Make your own Lodging arrangements with Western Hills Lodge (918) 772-2545
- Other facilities include: Wagoner Motel (6 miles) (918) 485-4593; Tsa-La-Gi Lodge (20 miles) (918) 456-0511; Indian Lodge (3 miles) (918) 485-3184; Camping in Western Hills Campgrounds -- Reservation number (918) 772-2046
- Talk-in on 146.52 Simplex

## — WESTERN HILLS RECREATION STAFF WELCOMES YOU! —

| Indoor Activities | |
|---|---|
| TABLE GAMES | Backgammon, Dominoes, Monopoly, Chess, Cards, etc. |
| ARTS AND CRAFTS | Macrame, Godseye, etc. (small fee for materials) |
| AMUSEMENT TABLES | Foosball, Ping-Pong, Pinball |
| MOVIES | Feature length and Nature films, all ages |

| Outdoor Activities | |
|---|---|
| TENNIS | By reservation, with your equipment or ours -- 2 courts |
| FRISBEE GOLF | Try this new activity with its nine-hole course |
| VOLLEYBALL | Available at any time to be checked out |
| SHUFFLEBOARD | Good for those who don't want to exert themselves and prefer to chitchat |

Other outdoor activities include archery, croquet, fitness trail, tram rides, horseback riding, stagecoach rides, golf on a beautiful 18-hole course, hayrides, bicycling, hiking, swimming, fishing and paddle boating.

Some activities are seasonal
Western Hills Recreation Department
Director (918) 772-2545 ext. 7385

# Salem

## VOICE RECOGNITION COMES TO THE KAHUNA!!

(Or Throw Them Touchtone Pads Away, Boys)

I have operated the 88 repeater since about 1971 or so and it has gone through considerable changes to its current Kahuna status. At first, it was just a simple motorola receiver and a watt and half VHF Engineering transmitter strip on top of the Engineering Center. Control of the system was not state of the art, but basically consisted of calling a telephone line to bump the repeater off and on. As I was able to get a couple of cranky Phase lock loops going, I modified the control circuits to work with touchtone decoders and the control was a quantum leap from the old "bump and dump."

That phase lock loop touch tone decoder stayed with me for a long time until I finally got the new repeater controller from Advanced Computer Controls. The new system was part of an overall overhaul for the 88 Kahuna and it not only was a giant leap forward, but a jump to a "state of the art" controller with more bells and whistles than you could shake a stick at. The RC-850 could talk, mute, delay, mix audio to beat the bank and in general was the guardian of the system. I let it take over the management of the system. After the initial fun of playing with the voice synthesizer, I toned down the voice messages to just a couple. Since the system has been installed, ACC has come up with a couple of new revisions in software that perform even more functions. Basic control, however, was still with touchtone commands. ACC had incorporated one of the latest decoders that digitally detected the touchtones. As long as you were not clipping the tone level into the repeater, touch tone detection was a snap. The Mitel tone decoders rarely missed a DTMF belch.

Because the number of functions that the controller could perform had been multiplied by a factor of 100, this meant that there only were a limited number of codes to use on the old repeater if you limited yourself to just a couple of digits for command sequences. With the expanded number of functions comes 3, 4, 5, and 6 digit command codes. To keep all these straight in the old brain was not easy. I finally took to carrying a set of peripheal "brains" in the form of index cards with the various command codes listed in my "shorthand" notations. Whew! Some of these were not easy to use and I finally got a couple of them committed to memory only to discover that just like a lot of things, if you don't use it, you'll lose it. Members experienced the same lapses what with all the user functions and their corresponding command codes to bring them up. It was nice to have the "Speak and Spell" voice synthesizer to tell you what you did, now all you had to do was to remember what to do to make it do it. And trying to plug in a whole bunch of touch-tones while driving down the road could definitely make a person a hazard to driving. Add to that the balancing act necessary to read the card, hold the walkie talkie and clumsy-handed plugging of the pad and all of a suddent there were three equations and three unknowns and as all you mathematicians know, those are not easy to solve.

Something had to go, or perhaps even give in the interest of member sanity and highway safety. That is why I was intrigued by ACC's latest announcement of software revision, Version 3.0 and 3.5. These were just high level enhancements of all the goodies that they were using before, but one added feature was a computer interface card that attached a modem to the computer controller and let you talk to the repeater in ASCII. No doubt that this is one of the more versitile accessories that could be added to the machine because it now permitted user equip-ment to be added to work in conjunction with the controller. I also saw that it would be the start of the solution to highway pollution caused by the touchtone follies required to control the controller while driving down the road.

I dashed off a quick check to ACC for the computer interface card and then called the head cheeses at ACC to confirm what I thought could be done with the computer interface card. After some head scratching, they suggested that there was no reason that it could not be done. I then turned to my trusty technical committeemembers, Roger WA5JXX and Tim KA5OHU, to see what they had in the old goodie box to put this project together. Both Roger and Tim scour the magazines in the Electrical Engineering field looking for things that are new. Occasionally, they order samples and boards for projects or tinkering. After a brief conversation, Tim told me that he had a board for voice recognition utilizing the Texas Instrument chip set lying around after a class project that was surplus to his needs. After a little cajoling Roger agreed to write some software that would allow the board to work with a Commodore 64 for full blown voice recognition. We added another modem (utilizing the AMD 7910 single chip modem) to talk to the computer through the control link with the RC-850 and after a little level setting and software tweaking, voice recog-nition became a reality on the repeater.

Now, users could throw those touch tone pads away in complete safety and merely ask the repeater to perform the function that was needed. The project has a limited vocabulary, but since things are changing all the time, it would probably be soon when the complete controller function capability will be available for voice recognition use. And in addition, it has been a real learning experience for the three of us.

As with most amateur projects, the hardware was dictated by what was available from other projects either finished or at hand. Tim had just finished a project using a Texas Instruments SBSP-3001 general purpose digital signal-processing board. The heart of the SBSP-3001 card is the TI TMS 320 single chip microcomputer, a honking mother as far as speed goes that is capable of performing over 5 million instructions a second. We had obtained a special version (for schools and other institutions) of the board designed for speech recognition SBSP-3001(AP1) which Tim had used in his speech recognition project. The board required the construction of some input circuitry that fed the analog signal into the front end of the board. The board then performs A to D conversions at a fantastic rate which are then compressed digitally to conform to TI's digital voice synthesis Linear Predictive Coding (LPC) method and then compared to the same data that is stored in EPROM memory to determine the "match" for recognition. A output can then be programmed to "talk" back to the RC-850 controller to perform the appropriate function using the computer modems.

The key to the system is the Digital Signal-Processing TMS320 chip and its speed to burn. 5 million instructions performed every minute is nothing to sneeze at (certainly to talk about) and voice recognition can be easily implemented. The speed of the processor is explained by the dual internal bus structure (See Figure 1, next page), one for data and one for instructions. Thus many parallel operations can be performed by the separate subunits contained on the 320 chip.

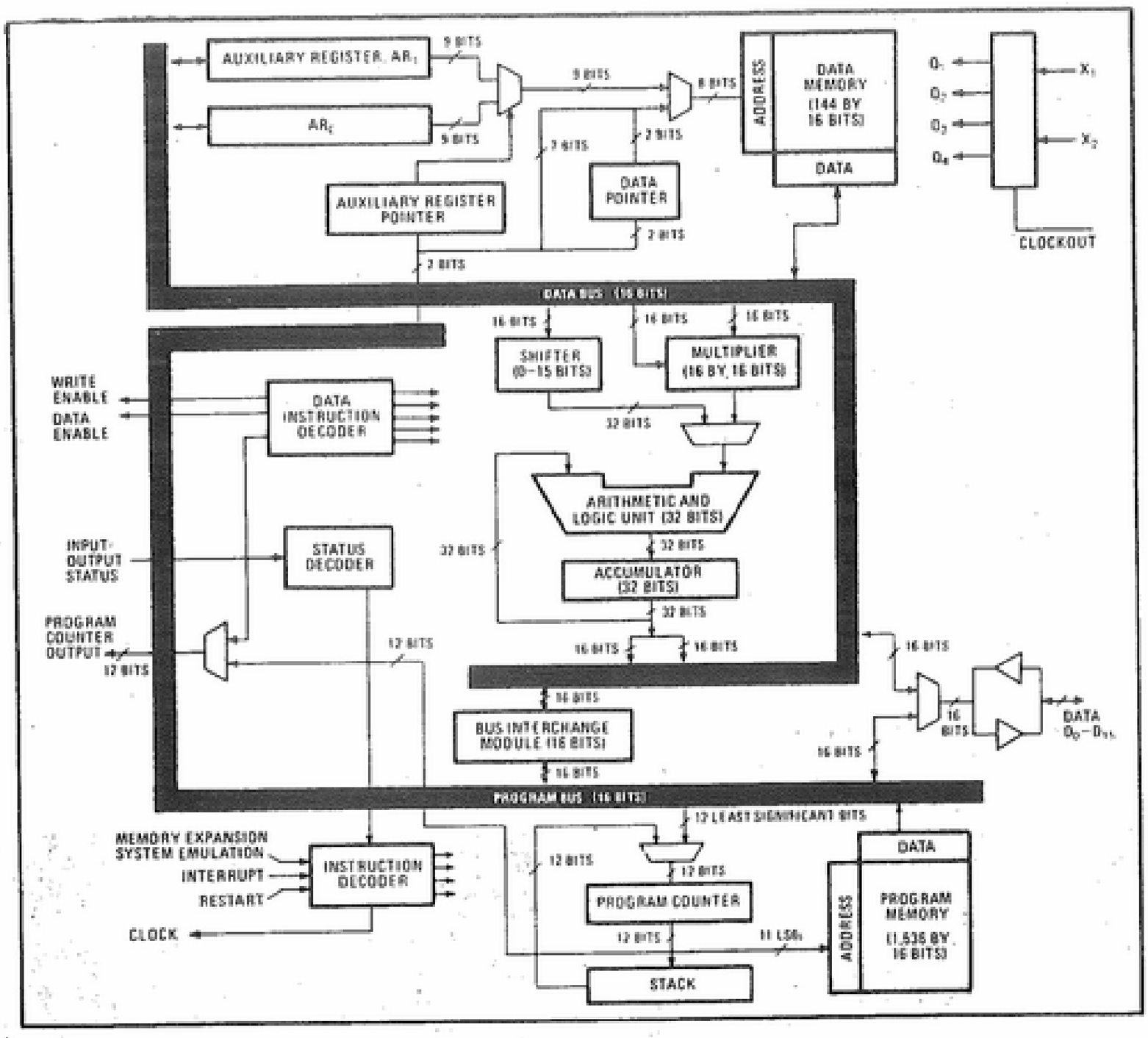



FIGURE 1. Internal diagram of the TMS 320 single chip microcomputer. Note that there are two internal buses, one separate bus for data and one separate bus for instructions. In this method, speed is enhanced because parallel operations can occur simultaneously. The method of two separate bus structures is known as the Harvard architecture for computers.

Speech recognition using the TMS320 involves four steps: feature extraction, pattern-similiarity measurement, time registration and a decision strategy. This basically means that you convert the incoming signal into digital data, compare it to speech already stored in the processor (called "templates"), and then make decisions by guessing (decision strategy) what the proper output should be.

The SBSP-3001(AP1) can recognize about 40 different utterances. We decided to restrict the machine to the minimum number that we could get by with to operate a couple of the functions including the autopatch and the voice response telemetry. After a couple of false starts, we got the machine to recognize several expressions and with some fine tweaking, it would recognize fairly consistently words like "autopatch", "time" and the first ten numbers. At least this much would let us call the repeater with patch functions and tell us the time.

In order to alert the speech recognition board that a number was on the way to be dialed, we taught the machine to recognize the word "recognize." When it first hears this word, it prepares to accept the command for the function to be performed. To let the computer know that the command is complete, we taught it to recognize the word "please." Thus the sequence to have the controller tell the time would be as follows:

"Recognize", "Time", "Please."

The repeater will respond with the controller giving the time. You must pause at least 200 milliseconds between each utterance to allow the speech recognition board to know that it is a different word.

This utterance sequence was really a demonstration and we found that we could get it to recognize any of our three voices without much trouble. The voice sequence for an autopatch call was just a little more complicated:

"Recognize", "Autopatch", "3-2-1--5-4-5-3"

"Please"

To terminate the call, just simply say:

"Recognize", "Off", "Please."

The controller then terminates the patch call.

There are plans being made to expand the functions that the voice recognition unit will be able to control. A lot of this is limited by the internal structure memory of the TMS320. But I think that in the not too distant future that there may be an opportunity to add some really sophisticated voice words like "remote base", "High Power" and "Wouff Hong." Right now, baby is walking. We don't seem to get a lot of falsing on the recognition for incoming speech. After a little experimentation, we ran the audio through a series of low pass filters designed to remove the distinctive "Okie twang" that so characterizes speech in Oklahoma. Didn't really need much work on this since the TMS320 was raised in Dallas and I expect that the boys at TI probably spoke to it as a baby with that soft accent.

So get ready to throw them touchtone pads away. Speech recognition is here and the way to get in on the fun is to simply open your mouth and call the repeater. The system is occasionally down for experimentation, so if you don't get it to work, try later. It might be also that your voice might need an adjustment on the "twang"filter.

Micheal Salem N5MS

## GET YOUR DXCC IN 21 DAYS
## OR BOOK YOUR EXPEDITION FOR 1985 TODAY

Many amateurs all over the world would like to join a DXPEDITION, but how many of us can make a dream come true? To fly or sail to a faraway country "big bucks" are needed. To find and transport the equipment is another heavy expense. Not many of us are able to write off complete outfits, fewer even like bullets and sinking ships.

Wouldn't you like to fly from New York to Africa in a wide bodied JUMBO jet like a BOEING 747 SP, travel through 4 to 5 countries, see wild life like elephants, crocodiles and operate with a rare call sign or rare area suffix? I have traveled to many rare countries (from Cairo to Capetown) with equipment and found one of the biggest problems that, in spite of the best planning, the antennas were always the worst part of the system. While touring the USA a few years ago with the call A22PS/W I got the idea to offer a DXPEDITION to US amateurs in Africa. It took me four years to iron out all the hitches that I encountered myself.

One of the challenges was to offer a tour through five mainly rural countries where everything was taken care of for the radio amateur. You can not simply walk into a RADIO SHACK shop and buy a barrel connector or co-ax. Even a soldering iron is, in some parts of Africa, a collectors iten. You night be able to order with a three weeks delivery time, if you have good contacts.

In order to provide transportation, accomodations, food and equipment about one-third of the tour features RV's and camp accomodations on sites with local power. All units are fully serviced. At Zimbabwae Victoria Falls site(Z2) accomodation and catering is provided in conjunction with the Goodwill Group of hotels. Operation here is from a large tent apart from the main hotel area, preventing TYI and other interference. Other excellent recreational facilities like fishing, game viewing, golf, swimming, etc. are also available here.

All main sites have one or two antenna masts (30 to 60 feet) with multi-band beams for the exclusive use of tour members. For OSCAR 10 enthusiasts, facilities are available to operate the satellite in Mode B and L. The IARU band plan 1 is applicable at all times.

At least one licensed local amateur accompanies the group of not more than 8 foreign amateurs on the complete tour in Africa. A hostess caters on all campsites. At least two large meals are provided each day. Within the S.A. Customs union area some excellent South African wine is provided with the compliments of the organizers. Light beverages are also free on tour. In fact, all that is needed is pocket money if you want to buy souvenirs, etc.

HAMVACATIONS provide you on arrival with log books and on departure supplies a reasonable quantity of commemorative cards for all your contacts on tour free of charge.

Can you afford to stay at home? The all inclusive price is only US $4895.00 per person (sharing) accomodation. Block bookings of four amateurs receives a special 10% discount. An international driving permit is required if you want to take the wheel.

The tour is available to amateurs with general and above licenses. Novice class amateurs can not be considered for short term permit applications. Technician class amateurs receive, in some instances, amateur licenses excluding the HF bands. Not all countries enroute issue lecenses to Technician class license holders. Here is one reason for you to upgrade.

All air transport is via regular scheduled carriers like PAN AM, SAA and AIR ZIMBABWE.

If required in advance a complete video outfit (BETA or VHS) will be made available for the duration of the tour. Only one outfit per tour is permitted. HAM VACATIONS does NOT accept the responsibility for any personal property belong ing to individuals. Do not bring any expensive items like heavy gold rings, diamond jewelry, etc.

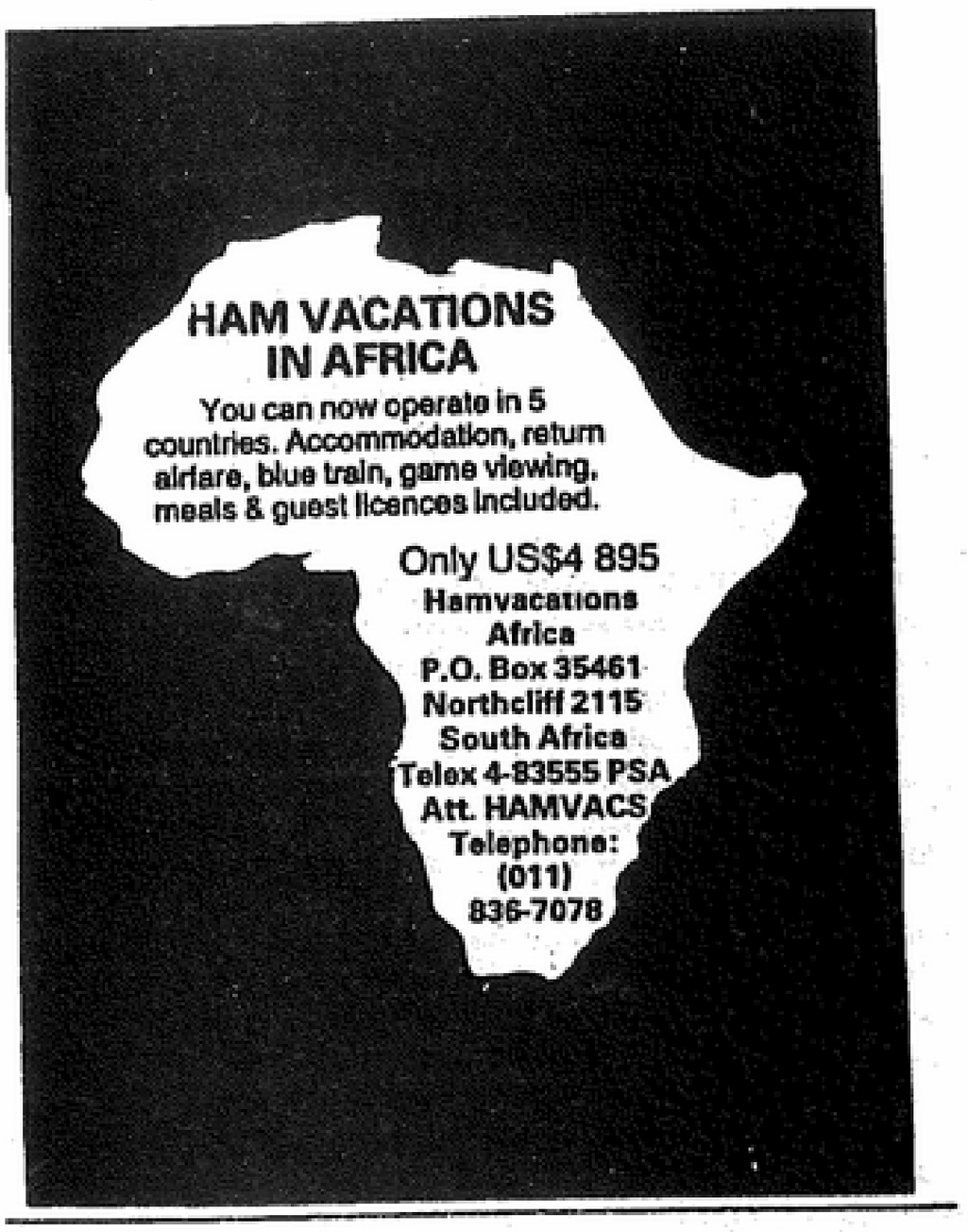
Booking must reach the organisers (HAMVACATIONS) at least three months before the intended date of departure in order to arrange guest licences in time for all countries. No tour vacancies are left for 1984. Earliest booking at the time of writing is February/March 1985. A deposit of US $1000.00 is payable when booking. The balance is payable 30 days before departure. MASTER, VISA and AMEX are acceptable. The total number of participants in HAMVACATIONS is limited to 100 amateurs per year.

Tours planned for 1985/86 include, Lesotho, Namibia and Mozambique (local conditions permitting).

Other countries of interest to foreign amateurs are Angola, Zambia, Zaire and Malawi. However, currently no facilities for the issue of short term permits seem to be available.

Should you require further information regarding touring Southern Africa contact - Peter Strauss, ZR6MI, c/o HAMVACATIONS, P.O. Box 35461, Northcliff 2115, South Africa.

Our new Telex number is 4-83555 P SA, Att. HAMVACS.




Mr. Joe Harding Managing Editor of Cora C&E

Dear Sir:

As you might know, Mr. John Rohner that published: SATELLITE TVRO DIGEST is out of business. He answers NO letters.

I have two discriminators built up from PC boards with 40-50 parts. Needless to say, I have been unable to get them to work.

Could you suggest anyone who could get these going or the address of this man??

Mike Feher, N4FS

Thanks,

Forrest Elliot Box 675 Port Orford OR 97465

Can anyone help this fellow???? if so write to him.

FOR SALE: New, 4 each Decibel Products DB-264 broad band antenna. 148-174 mHz (will work on 2 meter band). Cost $401 will sell for $295. Harold, WB9VMY, phone 495-1246.

# The South Canadian Amateur Radio Society

SCARS HAPPENINGS.....

The regular monthly meeting of the South Canadian Amateur Radio Society was held on March 9th at the Red Cross building in Norman. The main item of business was the decision to purchase a new contoller for the 147.66/06 repeater. The club voted to purchase an ACC RC-85 controller as soon as the purchase price can be raised. A small downpayment has been made, and the club will be trying to raise the additional money in the next few weeks.

AND NOW A WORD OF THANKS.....

Sometime on March 13 or 14, the W5OU repeater, 147.66/06, was apparently struck by lightning. The machine was subsequently off the air for a matter of days. Almost before the smoke had cleared from the sizzling experience, WA5TOO was on the spot to check out the damage. On Saturday, March 16, the machine was removed from its installation and taken to TD's shop where WA5TOO and KD5WA spent long hours repairing the damage to the machine and replacing other damaged components. SCARS would like to thank Darrell and Louis as well as Dean for the use of his shop. Thanks fellows.

NOVICE CLASS CONTINUES.....

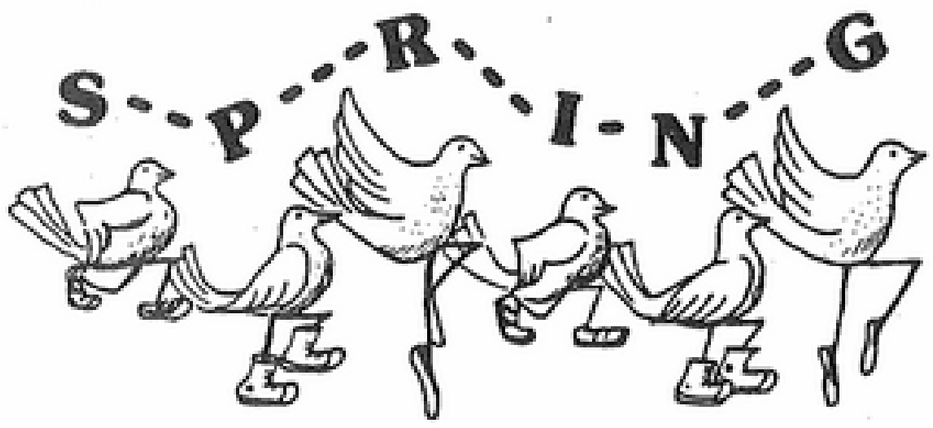
The Novice training class sponsored by SCARS continues with an enrollment of about twenty hopefuls. Monte, WB5RZX, is coordinating the course, and several members are helping out with the instruction. The class meets weekly on Monday nights at the Red Cross building. The time is 7:30 p.m.

VE EXAMS SCHEDULED.....

Amateur radio license exams will be offered on Wednesday, April 24th at 6:30p.m. They will be held in room 229 Kaufman Hall on the University of Oklahoma campus. If you are interested in attending this exam session, mail a completed Form 610 to Jack Bickham, KU5B, PO Box 164, Norman, Ok 73070. All applications must be received no later than April 17th. Each application must be accompanied a $4.00 fee in check or money order, made payable to SCARS. For more information, call Sam Barrett--321-2601 or give a call on the 147.66/06 repeater.

-wa5rpp-

FOR SALE:
--Yaesu FT-227R synthesized 10 watt 2M FM XCVR in original box w/manual - $100
--Shure 444 microphone (optimized for Oklahoma Twang) in original box w/manual - $20
--MFJ 941B Transmatch, rated at 300 watts - $20
------Call Wade-KB5EK-794-5144






# Q. R. Zedd

Back from his epochal DXpedition around the world in eight days, Q. R. Zedd was relaxing at Honor Roll Ranch, just a hoot and a holler south of town, when he considented to an interview the other day.

For those who have been unconscious, Zedd, the world's greatest DXer and holder of the only 1x1 callsign, worked 88 K from all the countries on the current DXCC list during a whirlwind world tour in a highspeed aircraft of his own design last month.

The aircraft has been taken to a special Air Force research facility in California for structural analysis, and the Pentagon has already announced that it plans to copy Zedd's design for production of a new fighter.

Zedd, however, was allowed to keep his logbooks and radios after the epic journey.

"It wasn't really too hard," Zedd told the C&E, "except parachuting in at Clipperton, getting mixed up with those guerillas in Laos, losing my way for a few minutes there in Africa, and of course the little tiff with the Russians."

The "tiff with the Russians" that Zedd mentioned was, of course, his arrest when he swooped in for a landing in Zone 19 and found Russian DXer Boris Badenov waiting along with contingents from the KGB. Badenov alleged that Zedd was a spy, and Zedd was detained for almost four hours. He might have been held longer if a worldwide outcry from deserving DXers around the world had not forced the leaders in the Kremlin to change their tune and let Zedd out to operate.

Zedd got back on his whirlwind schedule by working Africa and Europe the same day, instead of on following days, as originally planned. He finished up the Arctic in four hours and worked the last existing DXCC country at 0400 on the last day of the planned tour, making 11,230 contacts out of Cuba.

Fidel Castro gave Zedd special permission to operate, along with fifty fine cigars.

"I was glad to do it, and make so many people happy," Zedd told us. "It isn't everybody that can be great, and if working me made a lot of little fellers FEEL great, why, then I have been repaid in full for my effort."

Tondelayo Schwartz, nubile, blond, 20-year-old QSO secretary and constant companion to the great man, reported adoring crowds in most of the nations of the world. She said only weight limitations on the special aircraft prevented Zedd from coming back with tons of loot given by admirers.

"It was a great effort," said Bill Blast, operator of the famed Blast Off DX Net. With my help and great operating skills, we managed to let a lot of people work A5A. I was truly great in there, and I hope everyone appreciates how hard I worked to make this effort a success, and all."

Zedd announced at the conclusion of his press conference that he felt he had now done everything, and could retire from radio. A number of correspondents promptly fainted at hearing this, of course, and the ARRL sent two special envoys down from Newington to beg the great one to say it wasn't so.

After chuckling a bit at our discomfiture, Zedd relieved all our hearts by pointing out that he had only been making an April Fool's joke.

"How could I ever retire, boys?" he asked us, laughing heartily. "What would Amateur Radio be without me?"

There was clearly no way to answer that. And with any luck we shall never have to try.

-- KU5B

TRS 80C Central Oklahoma Computer Organization

Central Oklahoma Computer Organization

COCO Officers:

| | | |
|---|---|---|
| Chairman | - Bob Pace | 376-3569 |
| Vice Chairman | - Bob Helms | 733-3429 |
| Secry/Treas | - Kaye Derryberry | 681-0461 |

Meeting held at Red Cross Building
NW 10th & Hudson
2nd Saturday of the month 9:00 A.M.
Club Dues: $5.00 per year

Meeting Minutes

Meeting called to order by Bob Pace at 9:30 A.M. 90 members/guests attended the meeting on March 9, 1985.

Old Business:

1. Reminder-we need articles for the C&E. You may send them on COCONET under the name C&E.TXT or give them to Holly or Bob Helms. Be sure to use 46 characters on Telewriter.

2. MC-10 Contest Results . . .

The W I N N E R S are . . .

1st place - Martin Schiel winner of a Micro Color Computer and 16K expansion module. Martin was unable to be at the meeting but Jim Stover accepted his prizes for him !!

2nd place - Larry Griffin
3rd place - Jack Cochran
4th place - Tom Mangham

CONGRATULATIONS to each of these gentlemen!!

3. $$$ for COCONET

We still need about $250.00 for COCONET. If you contribute $10.00 and need a copy of MABEL, SAM MURR will be happy to help you out.

4. CORRECTION

The acoustical modem given as a door prize at the February meeting was donated by JOE SCHILLING. My apologies to Joe for the error. We really appreciate you !!

5. OS-9 COCO users group met March 15 at the home of Jim Petty at 9 A.M.

New Business:

1. The Computer Street Journal is looking for someone to report the club news. Here's your chance to be an EDITOR - see Bob Pace for more information.

2. COCONET -

a. The COCONET drives are running an average of 20 hours per day.
b. Two people each gave $10.00, six others gave $5.00 and Robby Runyon contributed $50.00 to the fund in March.

Total income for COCONET in March $100.00

3. Writing on disks should be done with FELT TIP pens ONLY. Even better write on the label before you stick it on the disk. Ballpoint pens and pencils should never be used on a disk.

4. Telewriter 64 patches - if you are in need of these see Harold TODD.

5. A request was made for a tutorial tape of beginning programming tips.

6. An informative review of the Color Kit utility was given.

7. Robby reported that he visited a COCO users group in Manassas, Virginia while on vacation.

8. A solution to the problem of indenting lines of code in a BASIC listing was given. Key in your program, then go to the EDIT mode and use Insert to place your spaces. This helps with the readability of your subroutines.

9. Bill Holland reported that a prototype MABEL2 is on COCONET which allows you to capture everything from the upper 32K buffer in the terminal mode.

10. A request was made for the meeting date and time for a Model 4 user group. They meet the 2nd Thursday of the month at Okla. City Community College on S. May at 7:30 P.M. Check at the information desk for the room.

11. BUDGET

Income:

| | |
|---|---|
| 5 NEW members | $ 25.00 |
| 9 RENEWALS | 45.00 |
| COCONET contributions | 100.00 |
| Total income | $170.00 |

Expenses:

| | |
|---|---|
| Rainbow on tape renewal | $ 80.00 |
| Total Expenses | $ 80.00 |

12. The door prize at the March meeting was won by Archie Washington. The prize was a LCD clock donated by Daniel Jamet. THANKS Daniel!! and congratulations to Archie !!

Two informative programs were presented. Jack Cochran discussed BASIC and also gave some valuable information on using COCONET for the novice users while Bill Holland continued the series of Assembly Language programs.

Many thanks to Jack and Bill for their excellent presentations. We would also like to express our appreciation to the ones working the disks each month. You all are doing a FANTASTIC job!!

See you all Saturday, April 13th. Bring a friend!

Secretary/Treasurer
Kaye Derryberry

# ARES

Paul Thompson N5PT
Okla. County EC, ARES

Public Service Update

In the "Let's Get it Right Next Time" department - My apologies to those fans and former fans of Mad Magazine who may have been offended by my incorrect reference to the origins of Alfred E. Neumann. A classic example of the "What, Me Worry?" attitude, eh? Ahd in the Red Face department - after countless announcements of the times and frequencies of the local Oklahoma County ARES net, I announced wrong in last month's issue. The correct information is:

1st and 3rd Thurs. - 28.7 MHz / 28.110 CW
2nd and 4th Thursdays - 146.34/.94 MHz

All the nets meet at 8:00 PM local time. As we had a couple of rather slim nets, this could have been part of the problem, and I apologize to anyone who came looking for us and couldn't find us. Don't let that stop you, though. We are getting to be a good group with enough regulars to begin planning for the training that we will conduct on the ARES nets.

I enjoyed meeting with the MORI club on March 5th and the opportunity to share with the members in attendance about ARES. I had several after the meeting respond to the call for help and I do appreciate that. I only wish that it was possible for me to attend more of these club meetings where you find so many active and interesting people involved!

Speaking of those who have volunteered to help us here in OKLAHOMA County ARES, we have just appointed a new Assistant Emergency Coordinator (AEC) in the area of Public Relations. This person is Holly Stewart (Stu) KD5DL, and he will be a great addition to the organization. Stu has just returned to Oklahoma from a stint in Germany and has been active in ARES here in the past. You may want to refer to the article on page 89 in February 1983 QST entitled "Operation Watchdog" for a sample of his work. Stu will be working on getting together a press kit which could be used whenever an emergency of any type strikes here in our area. The kit would contain information for the media on what amateur radio is, what amateur operators can and and have done for the public in past crisis situations such as hurricanes on the Gulf Coast, tornadoes here in Oklahoma, fires and earthquakes in California, etc. Stu will also be the ARES contact for the media during such an event, and he will report on ARES activities in the area to QST and to local news organizations.

We have AECs now in the following areas:

| | | |
|---|---|---|
| The Village | - Mark Northcutt | WD5DYI |
| Spencer/Jones | - Bill Edwards | KE5RY |
| Membership | - Sue McGlynn | KE5QN |
| Microwave | - Dick Baker | WB5TMW |
| Public Relations | - Holly Stewart | KD5DL |

Thanks to these talented folks for their good work and what they will be doing in the future. If you have a talent that you feel might be of use to ARES, give me a call! We have need for net control stations still for ARES nets, a net manager, a training coordinator, club liasons (one from each club), and AECs in Edmond, Bethany, Warr Acres, and Midwest and Del City. On the club liasons, perhaps each club could appoint or vote in a club emergency coordinator who could check into ARES nets, participate in ARES planning sessions, etc.

I have included an ARES registration form in this month's issue of C&E. Many of you have been active and perhaps sent in forms in the past but we need to get that information updated. Besides we don't have any of the old forms available (at least, we havn't located them yet, there's still a possibility). Please send these forms to me or Sue McGlynn. This will help us immensely in our dealings with public service-related agencies; it will let them know we can activate a relatively large group of amateurs when called on.

Our Oklahoma City Zip Code coordinators so far are:

| | | |
|---|---|---|
| Mike | KA5TSD | 73115 |
| O.J. | WB5SRX | 73130 |
| Hershall | N5ABM | 73135 |
| Richard | KA5TTH | 73122 |
| Bill | WD5EXY | 73116 |

Their job is to contact and sign up hams for ARES in their areas. A list of all known radio amateurs in their zip code areas has been provided them to help in this task (thanks to Richard Gimmel KA5TTH).

Paul Thompson - N5PT - Okla County EC

Name: _____ Call: _____

**AMATEUR RADIO EMERGENCY SERVICE**
REGISTRATION FORM

Address: _____

City: _____ State/Prov.: _____ Zip/PC: _____

Bus. phone: _____ Home phone: _____ County: _____

License Class: _____ Primary radio interest: _____

Check (✓) bands/modes you can operate:

| | 160 | 80 | 40 | 20 | 15 | 10 | 6 | 2 |
|---|---|---|---|---|---|---|---|---|
| CW | | | | | | | | |
| FM | | | | | | | | |
| RTTY | | | | | | | | |
| SSB | | | | | | | | |
| MOBILE | | | | | | | | |

Can your home station operate without commercial power? [ ] YES [ ] NO

If yes, what bands? _____

Signed: _____ Date: _____

## MORE AMSAT NEWS

make. The simplest way to go is to use receive converters for your HF radio, Microwave Modules makes inexpensive and high gain units for this use that allows you all the features found on your HF radio like the filters that are not on the high dollar multi-mode rigs. The neatest device is now available from Ten-Tec the model 2510 which incorporates a receive converter with a 430 SSB transmitter all in one unit. It has spot tuning for instant QSY and the receiver is really hot using a GasFet in the front end sc a preamp is not needed. 10 watts output power. The recieve converter can be used with your HF radio or an ordinary general coverage receiver with 10 meters. With one of these units and a good circular polarized antenna you should have no problems hearing the beacon on 145.810 MHZ. Try to hear the satellite first then start on the uplink portion taking it one step at a time.

This last bit of information concerns the future and what lies ahead for amateur radio satellites. Amsat has just received word that a mid-1986 launch date on the Ariane 4 launcher is available and Amsat teams around the globe have begun an ambitious project toward the construction of the Phase 3C satellite. If all the options are used, Phase 3C could carry as many as 4 transponders ranging from 2 meters to 13 cm. New digital modes and operating techniques could make this project one of the most exciting ever. This is only a part of what is in store for Amateur Satellite enthusiast within the next year.If your interested,join us and help support Amsat with your membership,the future of the Amateur satellite program depends upon your input and ideas....73's WD5GLD

THE ARRL Letter

Volume 4, Number 5

February 28, 19

# FCC Lifts Repeater Moratorium!

The FCC has issued an Order which rescinds the moratorium on new repeater operation which was imposed by the NPRM (Notice of Proposed Rulemaking) in PR Docket 85-22. The moratorium had been imposed to "forestall a growing number of amateur repeater interference complaints." For details on the moratorium and the original NPRM, see Volume 4 Number 3 of The ARRL Letter. The ARRL filed a Petition for Partial Reconsideration in this proceeding, asking the Commission to lift the moratorium, and pointing out that repeater operation is permitted by Part 97, and that a Notice of Proposed Rulemaking could not in and of itself modify an existing rule. More details on the Petition appeared in Volume 4 Number 4 of The Letter.

In addition to the ARRL Petition, the Tri-State Amateur Repeater Council (TSARC) filed a Petition recommending that the moratorium be lifted for all bands except the two-meter band. The original moratorium applied to all repeaters in metropolitan areas, including "digipeaters."

The Order was adopted February 15, and released February 21. The Commission states "Filings by the American Radio Relay League (ARRL) and by the Tri-State Amateur Repeater Council (TSARC) raise serious difficulties with the imposition of the moratorium, including financial hardship to those with repeater construction in process. The problems persuade us to rescind the moratorium. Instead we will seek a permanent solution to repeater problems in this proceeding. We request substantive comment on all issues relevant to solving questions of interference and congestion by and to stations in repeater operation."

This request for comments on ways to solve repeater-to-repeater interferen problems has been the important feature the NPRM all along. The FCC stated th the NPRM had its origin in the fact th the number of repeater-to-repeater inte ference complaints in 1984 was more th three times the number recorded in 198 The original NPRM stated "we seek comme on whether we should require an amate operator to seek the recommendation of local frequency coordinator for the inp and output frequencies of any repeat located within a Consolidated Metropolit Statistical Area (CMSA) or a Metropolit Statistical Area (MSA)...We also requ comments on whether we should consi alternative methods of frequency coo dination. Additionally, we seek comm on whether the voluntary or required of modern technological innovations (s as the use of narrow-band technologi ACSB, or tone-operated squelch techniqu is a more appropriate solution...than proposed solution. Comments are a sought with regard to whether the should recognize a single national f quency coordinator for the Amateur Ra Service."

The FCC has recognized the repeat to-repeater interference problem, asked for input from the amateur commun on ways to solve it. We all have a cha to help shape future policy on this iss Formal comment requires the filing of original and five copies, but a sin copy may be considered informa Comments are due by July 1, 1985, re comments by September 30, 1985. Copie the original NPRM, the ARRL Petition Partial Reconsideration and the O rescinding the moratorium may be obta from ARRL Hq. by sending a large s.a with 73 cents postage affixed.

## MOBILE RADIO BAN INTRODUCED IN ARIZONA

A proposal has been introduced in the Arizona state legislature which would prohibit the operation of mobile communications equipment, including Amateur Radio equipment, in a moving vehicle.

Designated S.B. 1346, the proposed legislation states "A driver of a vehicle shall not operate a car telephone unless the vehicle is stationary and at a location which does not interfere with other traffic. For the purpose of this subsection, 'car telephone' means a device which is attached to a vehicle and in which sound is converted into electrical impulses for transmission without a wire and includes citizen band radios or other similar mobile radios."

The bill would also prohibit operating a motor vehicle equipped with a television receiver which is visible to the driver.

The proposed legislation would not apply to authorized emergency vehicles, vehicles operated by an employee of "a political subdivision" of the state or vehicles operated outside the boundaries of an incorporated city or town.

## RESIDENTS FILE PETITION CONCERNING PROPOSED HIGH-VOLTAGE TRANSMISSION LINES

Concerned residents of Avra Valley, Arizona, have filed a petition with the Regional Environmental Officer of the U.S. Bureau of Reclamation concerning the Tucson Aqueduct project. The petition asks for a review of the Environmental Impact Statement filed in the project, and states "It is our considered opinion that the construction and particularly, the operation of the pumping stations and associated high voltage transmission lines will create a serious environmental impact in regard to the reception of television, radio and other forms of radio frequency signals...We believe that introduction of the 115 Kilovolt power transmission lines as well as the pumping stations, will create enough electrical interference in this environment to impair, if not preclude, the reception of television and radio signals...Furthermore, the most significant of our concerns is in regard to the possibility of a detrimental impact on public service radio reception and transmission...Any interference to these communications systems, such as the electrical interference which may be caused by pumping stations and high voltage transmission lines, could result in the loss of property or lives since the residents of Avra valley depend on these organizations for fire, police and medical services."

The residents of Avra Valley ask "that an in-depth study be completed to establish the levels of electrical interference which would be created by introduction of the Tucson Aqueduct Phase B pumping stations and their associated power transmission lines. Further, we ask that the study describe the possible impact which interference would have on each of the radio and television services mentioned above and that the study offer methods of mitigating any possible interference to these services."

A copy of the petition was also sent to the FCC, with a request that the Commission open a file on the matter.

## ANOTHER "DOMINO" GOES TO 20 kHz

At a meeting in Arlington, Texas on February 16, members of the Texas VHF FM Society voted 87-11 in favor of adopting the Pacific Northwest 20 kHz band plan for 2 meter repeaters. For more information on the recent decision by Michigan to adopt the 20 kHz band plan, see Volume 4 Number 3.

## SLIDES NEEDED FOR PUBLIC RELATIONS

Photographers and Club historians - your help is needed in assembling a slide show to explain Amateur Radio to police departments and other public service agencies. If you have recent color slides of hams in action, please send copies to Stephen Mendelsohn, WA2DHF, Public Relations Advisory Committee Board Liaison, PO Box 444, Little Ferry, NJ 07643. Slides cannot be returned. Please put the club name, or call sign, on each slide, and explain what each slide shows on a separate sheet of paper included with the slides.

## CLUB CHALLENGE FEEDBACK

In Volume 4 Number 2, in the article "Club Challenge for the '80s," a year-end drawing was announced. Because of U.S. Postal restrictions, a drawing will not be held. Further details on the various awards and prizes will be reported in The ARRL Letter in the months to come.

## FCC CENSURE-Y CLUB

**Eugene Sykes, W400** - on February 15, 1985, a jury in the U.S. District Court for the Southern District of Florida returned a verdict against Eugene C. Sykes in the case of U.S. vs. Eugene C. Sykes. The U.S. had brought suit against Sykes to collect a fine of $550 imposed by the FCC for excessive power operation in the Amateur Novice bands.

Sykes, W400, an Extra Class Amateur, was caught operating on a Novice frequency with excessive power by Commission personnel on May 27, 1982. The FCC monitored him because of complaints that he had been causing malicious interference to another Amateur operator. Engineers from the Miami field office and the Ft. Lauderdale monitoring station found that Sykes was operating with more than 540 watts on a frequency limited to 250 watts. As a result, the Commission imposed a $550 fine for his willful violation of Section 97.67 of the Amateur Rules. Sykes refused to pay, and the Commission referred the matter to the U.S. Attorney for the Southern District of Florida to file suit to collect the fine.

**Jerry R. Dyke, WD8LEU** - the Houston office of the FCC has fined three Houston-area individuals for using excessive power and unauthorized frequencies. Jerry R. Dyke, WD8LEU, of Spring, Texas, was fined $2,000 for using 25,000 watts of transmitter power. Harris E. Maulden and Arthur A. Partain, both of Pearland, Texas, were fined $2,000 each for unlicensed operation on Amateur Radio frequencies.

## CORDLESS PHONE COMPANIES RECEIVE FINES

Three distributors of cordless telephones have been fined $2000 each for repeated sale of telephones that fail to meet the FCC's radiated power limitation. Based on measurements taken by the Office of Science and Technology, the Field Operations Bureau has sent Notices of Apparent Liability for Monetary Forfeiture to TAD Avanti, Dynascan and Uniden.

The staff of OST's Sampling and Measurements Branch is continuing to test cordless phones and other devices in order to determine whether equipment, once approved for marketing, continues to comply with the technical standards throughout its manufacturing period.

## WASHINGTON TAXI DRIVERS CAUGHT WITH ILLEGAL CB AMPLIFIERS

In a January 7 Public Notice, the FC announced that three Washington DC tax drivers were fined for using illega linear amplifiers with their Citizen' Band equipment. The Federal Aviatio Administration (FAA) had complained to th Commission that taxi drivers servin Washington National Airport were causin interference to aircraft communications The interference occurred when taxis nea the airport illegally used linear ampli fiers with their CB radios. The FC recently inspected the radio equipment o all taxis coming through the airport, an several taxis were found to have ampli fiers illegally attached to their C radios. Three drivers were fined $30 each for the illegal installations.

The FCC considers this interferenc problem, which has raised safety-of-lif concerns, a high priority matter. Th Commission will continue to conduct tax inspections at Washington Nationa Airport.

## NARTE EXPANDS TECHNICIAN CERTIFICATION PROGRAM

The National Association of Radio an Telecommunications Engineers, Inc. (NARTE has announced the expansion of it technician/engineer testing program designed to replace and modernize th program for the Private Radio Service formerly administered by the FCC.

Under NARTE's Grandfather Rules technicians and engineers who hold licen ses issued by the FCC may apply for NART certification without examination Persons wishing to take advantage of thes provisions must file applications befor December 31, 1985. NARTE also offers basic examination for persons seeking cer tification as entry level radio telecom munications technicians.

On November 1, 1984, Chemetka Colleg of Salem, Oregon, became the first colleg to join with NARTE in offering approve testing and certification. NARTE i currently negotiating to expand it testing capabilities to almost 40 vocational/technical colleges nationwide.

## SPACE SHUTTLE AUDIO RETRANSMISSION.

The Goddard Amateur Radio Club, WA3NAN at the NASA Goddard Space Flight Center in Greenbelt, Maryland, retransmits live Space Shuttle audio. Coverage begins within the hour before liftoff, and continues through the flight and until about an hour after landing. WA3NAN will not be on the air during astronaut sleep periods.

The following frequencies are used: 3860, 7185 and 14295 kHz SSB. Washington DC area listeners may also monitor 147.45 MHz FM.

WA3NAN operates under a blanket waiver of Section 97.113 issued by the FCC for the duration of all Space Shuttle flights (see "Happenings," November 1983 QST for details on the waiver.)

## QSL BUREAU REMINDER

Did you remember to send your incoming QSL Bureau extra postage or mailing credits to cover the increase in postage rates? The new rates, effective February 17, 1985, raise the cost of the first ounce to 22¢. Each additional ounce is 17¢.

## RECIPROCAL PERMITS

If you are planning a vacation abroad this summer, now is the time to start thinking about applying for a reciprocal operating permit for the country (or countries) you plan to visit. Processing the paperwork takes time, so it's never too early to get things rolling. For more information on applying for a reciprocal permit, write to the Information Services Department at ARRL Hq. Please enclose an s.a.s.e., and let us know which countries you want information on. Here is a current list of countries with which the U.S. has reciprocal operating agreements:

| | | | | | |
|---|---|---|---|---|---|
| (V2 | Antigua) | F | France | PJ | Neth. Antilles |
| LU | Argentina | DL | F.R. Germany | ZL | New Zealand |
| VK | Australia | SV | Greece | YN | Nicaragua |
| OE | Austria | J3 | Grenada | LA | Norway |
| C6 | Bahamas | TG | Guatemala | HP | Panama |
| 8P | Barbados | 8R | Guyana | ZP | Paraguay |
| ON | Belgium | HH | Haiti | OA | Peru |
| V3 | Belize | HK | Honduras | DU | Philippines |
| CP | Bolivia | TF | Iceland | CT | Portugal |
| A2 | Botswana | VU | India | J6 | St. Lucia |
| PY | Brazil | YB | Indonesia | 9L | Sierra Leone |
| VE | Canada | EI | Ireland | H4 | Solomon Islands |
| CE | Chile | 4X | Israel | EA | Spain |
| HK | Colombia | I | Italy | PZ | Suriname |
| TI | Costa Rica | 6Y | Jamaica | SM | Sweden |
| OZ | Denmark | JY | Jordan | HB | Switzerland |
| HI | Dominican Rep. | T3 | Kiribati | 9Y | Trinidad |
| (J7 | Comm. Dominica) | 9K | Kuwait | T2 | Tuvalu |
| HC | Ecuador | EL | Liberia | G | United Kingdom |
| YS | El Salvador | LX | Luxembourg | CX | Uruguay |
| 3D2 | Fiji | 3A | Monaco | YV | Venezuela |
| OH | Finland | PA | Netherlands | YU | Yugoslavia |

## NAVASSA DXPEDITION

The Navassa DXpedition will be held April 3 through April 9. The group is planning to leave April 3 from Kingston, Jamaica on HIGH ISLE, a 78 foot fishing boat, and should be on the air by 1800 UTC April 4. The /KP1 stations will be on the air for 96 hours. Three stations will be on the air, using two beams and two verticals, with long wire antennas for the low bands. One station will be on CW, operated by 6Y5HN, 6Y5FS, G3RFS and K2SG on 8 hour shifts. The other two stations will be on SSB, operated by 6Y5NR, 6Y5IC, 6Y5KC, KP2A, N2EDF and 6Y5CA on 8 hour shifts.

This is a privately funded operation, aiming to give as many contacts as possible to eager DXers and trying to exceed the magic number of 33,552 contacts set by the previous DXpedition to Navassa.

## VOLUNTEER EXAMINER DOCKET CORRECTED

In Volume 4 Number 3, we told you about PR Docket 85-21, the NPRM proposing to eliminate the required waiting period for amateur license examinations administered under the VE program. The comment deadline for this Docket has been corrected by the FCC. Comments in this proceeding are due by April 8, 1985, reply comments by May 10, 1985.

**SUMMARY of VEC TESTING ACTIVITY from FCC DATA**
This data is based on results received at the FCC's Gettysburg office as of January 31, 1985. Because of processing time, this data is from test sessions that occurred from approximately mid-December to mid-January.

| VEC ORGANIZATION | SESSIONS COMPLETED | ELEMENTS GIVEN | NOTES |
|---|---|---|---|
| ARRL/VEC | 143 | 3480 | — (66% of all test activity nationwide) |
| MSTI (4,5,6,8,9) | 14 | 460 | — (14% of activity in areas 4,5,6,8,9) |
| DeVRY (9-land) | 16 | 250 | — (49% of 9-land activity) |
| CENT.ALABAMA | 14 | 339 | — (33% of 4-land activity) |
| METROPLEX | 4 | 143 | — (33% of 2-land activity) |
| BEARS (7-land) | 5 | 79 | — (24% of 7-land activity) |
| SUNNYVALE CALIF. | 4 | 78 | — *(see note below) |
| DARA (8-land) | 2 | 71 | — (program now merged with ARRL) |
| GREATER LOS ANGELES | 6 | 60 | — *(see note below) |
| N.CAROLINA | 2 | 41 | |
| SAN DIEGO ARC | 4 | 37 | — * - NOTE: |
| SCHENECTADY | 1 | 34 | SUNNYVALE, GLAARC, AND SANDARC: |
| TRIAD (N.Carolina) | 1 | 31 | the combined activity of these |
| KOOLAU | 1 | 21 | three VECs accounts for 22% of |
| PHD (Missouri) | 1 | 11 | the testing activity in 6-land. |
| ANCHORAGE ALASKA | 1 | 8 | |
| | 219 | 5131 | |

**VEC ORGANIZATIONS WITH NO ACTIVITY REPORTED in THIS PERIOD**

| | | |
|---|---|---|
| Adirondeck | Honolulu | Mid-South |
| Charlotte | Laurel | Milwaukee |
| Dallas | MARS | Mountain |

*THE ARRL LETTER* is published bi-weekly by the Information Services Department of the American Radio Relay League, 225 Main St., Newington, CT 06111; (203) 666-1541; Larry E. Price, W4RA, *President;* David Sumner, K1ZZ, *Executive Vice President;* Bruce S. Hale, KB1MW, *Editor.*



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## HAM HAPPENINGS REFER TO CLUB SECTION FOR SPECIFICS

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| | APRIL FOOLS DAY 1 CIMARRON | MORI Great Plains 2 | 3 | Aeronautical Center ARC 4 | 5 | 6 |
| 7 | EDMOND Club 8 | 76'ers 9 QSO | 10 | ALTUS AREA 11 | 12 | SCARS ARDMORE COCO 13 |
| Wheatstraw QCWA 14 | 15 | AUTOPATCH 16 | 17 | KAY County 18 | GEARS! 19 | VHF Club 20 |
| 21 | VEC EXAMS EDIT COLLECTOR - EMITTER 22 | CORA MEETING 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | | | **APRIL** The managing editor assumes no responsability for the data contained herein. | |

VEC EXAMS MONTHLY, 4th MONDAY WALKINS WELCOME