

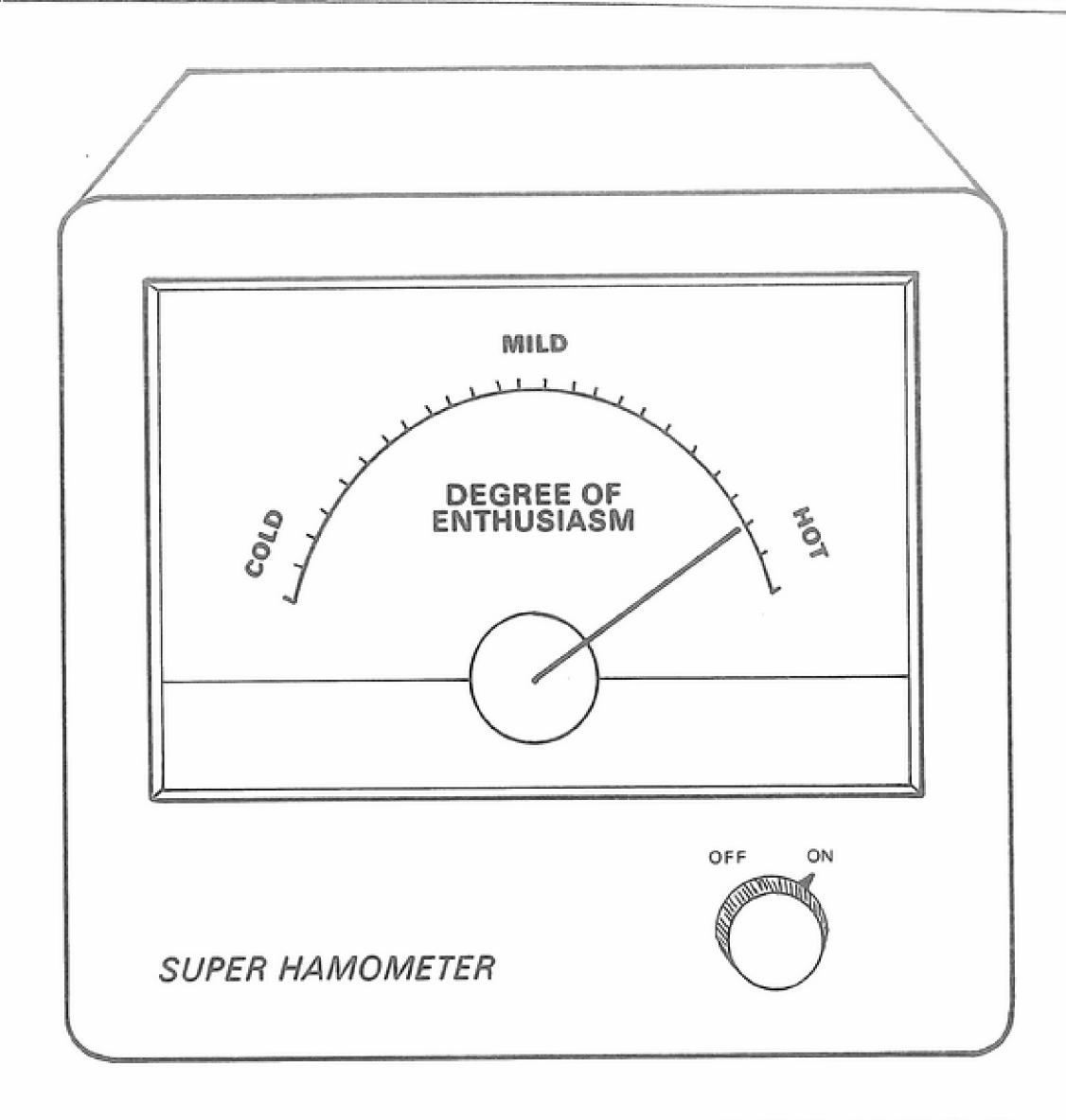
AN INFORMATIVE MAGAZINE
PUBLISHED MONTHLY BY AND
FOR OKLAHOMA RADIO
AMATEURS

AND ANYONE INTERESTED IN LEARNING ABOUT IT

Volume 6

MARCH 1980

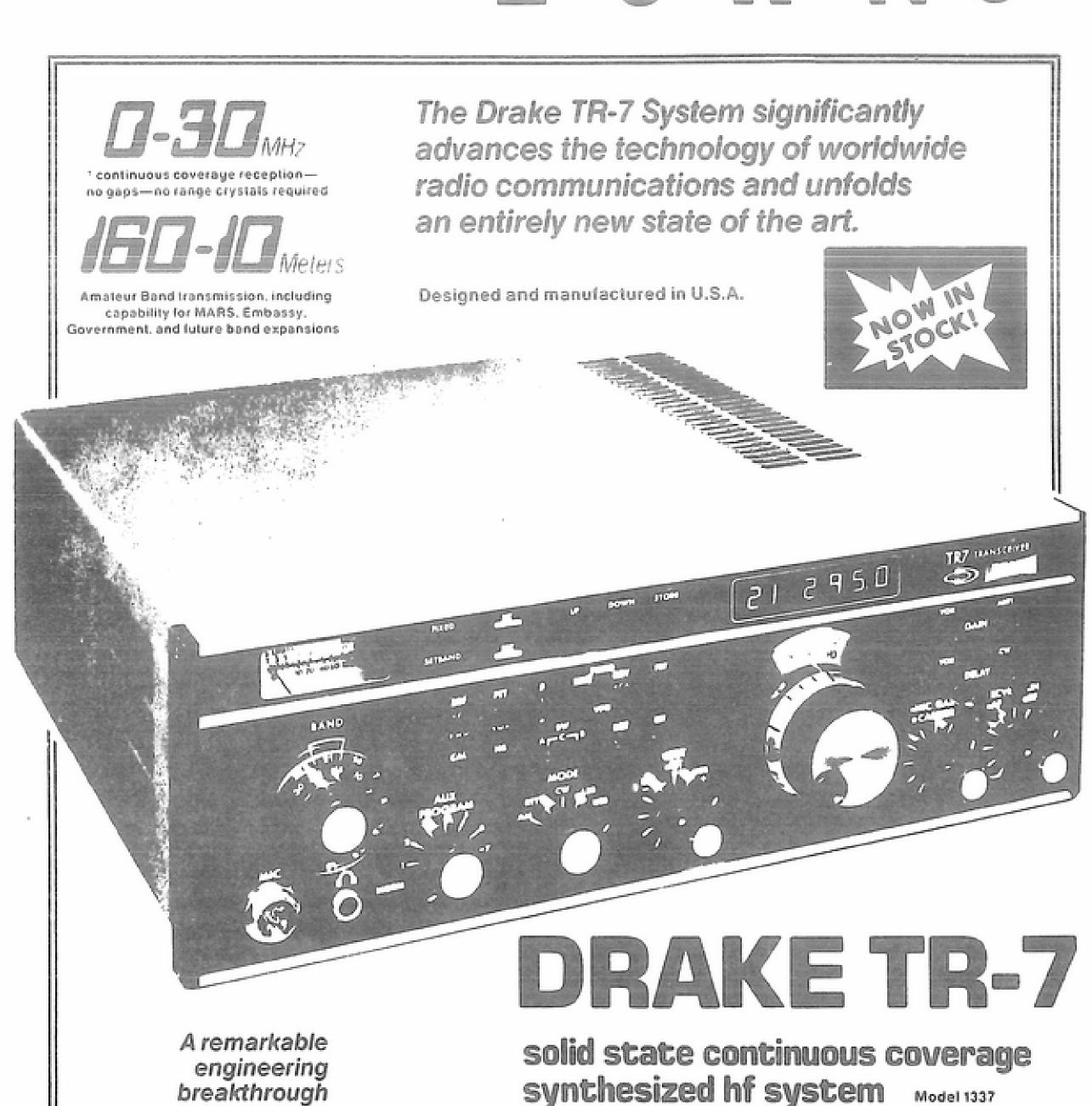
Number 62



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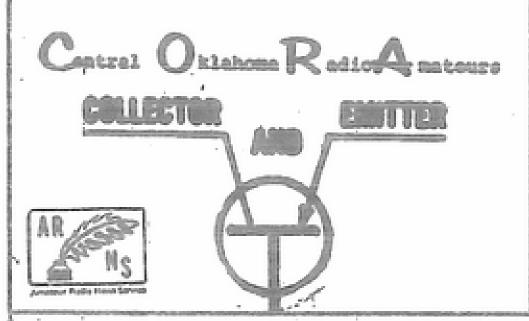
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Central Oklahoma Radio Amateurs, Inc. (CORA) is a not-for profit association of radio amateurs, founded for the promotion of interest in amateur radio communication and experimentation, for the advancement of the radio art and of the public welfare and operates to enhance the cooperation of member clubs in sponsoring activities of mutual interest to the clubs and all radio amateurs.

President Vice President Secretary Treasurer Chuck Wilhite Bob Graham Kay Northcutt Ron Recer K5NK 721-4926 WB5NSV 677-8685 WD5DYJ 842-1086 KE5M 751-5378

CLUBS PARTICIPATING IN CORA

	CLUBS PARTICIPATING IN CURA	
1 AERONAUTICAL CENTER ARC	2 OKLAHOMA CENTRAL VHF CLUB	3 MID-OKLAHOMA REPEATOR, Inc.
MEETS: 8:00 PM First Friday each month Flight Standards Bldg. FAA Aero Center	MEETS: 8:00 PH Third Friday each month American Red Cross, 10th & Hudson OKC	MEETS: 8:00 PM First Tuesday of month Okla City EOC, 4600 M Eastern
Pr WASCJG Bob Pace 376-3569 VP K5KDR Bill Oliver 329-6333 Se WB5NSV Bob Graham 677-8685 Tr WB5NSV Bob Graham 677-8685 Ed WB5NSV Bob Graham 677-8685	Se K5JB Joe Buswell 732-0676	Pr KASCXW Fred Taylor 528-1537 VP MB6PM2 Bob White 681-9222 Se MSBEQ Jim Buswell 236-0368 Tr K5PER Jim Jones 634-5235 Ed M85NMK George Lee 946-2754 Dues: Sid Gerber 829 Bouse MMC 73110
4 OKLA CITY AUTOPATCH ASSOCIATION	5 OKLAHOMA UNIVERSITY ARC	6 ALTUS AREA AMATEUR RADIO ASSOC.
MESTS: 7:30 PM Third Tuesday of month	MEETS: 8:00 PM (Sep-May) 2nd Tuesday 200= 497, Carson Engineering Center	MEETS: 7:30 PM 2nd Thursday each month North Main Fire Station (CD) Altus
Pr MASCZN Doc Goodhead 721-8592 VP M5NK Chuck Wilhite 721-4926 Se WD5HXB Karen Recer 751-5378 Tr	Pr KA5DHF James Gardner 321-8779 VP WB5QLF Alan Wormser 325-2194 Se KA5COI Peter Richeson 325-3015 DUES: K85BF Nathan Kirby 364-7979	Pr WSKI Steve Norris 482-4815 VP S/T WSVXU Mike Schenkle 482-1797
Ed K5NK Chuck Wilhite 721-4926	Ed KB5BF Nathan Kirby 364-7979	Ed W5VXU Mike Schenkle 482-1797
7 BICENTENIAL ARC (THE 76'ERS)	9 WHEATSTRAW AMATEUR RADIO CLUB	10 CHOCTAM AMATEUR PADIO CLUB
MEETS: 7:00 PM 2nd Tuesday each month Air National Guard, Will Rogerts Apt.	MEETS: 2:30 PM First Sunday of month Location Varies. See club section	MEETS: 7:30 PM 2nd Monday. Woods Comm- unity Baptist Church, SE 29 & Choctaw
Pr ND5BMP Joe Couch (Guthrfé)282-4353 VP ND5DYJ Kay Northcutt 842-1086 Se N5BEQ Jim Buswell 236-0366 Tr KF5E Tom Cassady 751-1194	Pr WB5JNT Ted Vanlangham 262-1675 VP AB52 Ray Barnes S/T WA5PFK Ralph Wilder 623-5421	Pr AB5H Frank Carter 391-3394 VP WD5EVP Bob Allen Se N5ARV June Allen Tr KA5ALO R. G. Edwards 390-8297
Ed KASFED Susie Atkinson	Ed WB5WTH Virginia Beneda 825-3302	Ed NSARV June Allen
11 EDMOND AMATEUR RADIO SOCIETY	12 SHAWNEE AMATEUR RADIO CLUB	13 KAY COUNTY AMATEUR RADIO CLUB
MEETS: 2:00 PM 3rd Sunday, Room 205 Science Bldg. Central State Univ.	MEETS: 8:00 PM 2nd & 4th Tuesday Shawnee City Hall - EOC	MEETS: 7:30 PM 3rd Tuesday of month Security Bank Basement, Ponca City
Pr WD51DB Howard Wise 341-2510 VP WD5HXK Ken Stepp S/T WA52LW 8111 Wright 341-6076	Pr WB50NL John Owens 273-0848 VP WD5FUG Les Stewart 567-3895 S/T WB5TZQ B111 Warren 275-0119	Pr MB5DOT Chuck Willis 765-5366 Pr M5ZMM C. L. Hallmark 762-8620 S/T W5TXF Jay Williams 765-9440
Ed WD51DB Howard Wise 341-2510	Ed WD58UQ Jay Tingler	Ed WB5DOT Chuck Willis 765-5366
14 AMATEUR TV EXPERIMENTAL SOCIETY	15 SOUTH CANADIAN AMATEUR RADIO SOCIET	16 EDMOND AMATEUR RADIO CLUB
MEETS: 7:30 PM 2nd Thursday each month Central State Univ. Edmond	MEETS: 9:30 AM 3rd Saturday each month Red Cross Bldg. North Campus Norman	MEETS: 7:45 PM First Monday of month General Electric, 3228 N Santa Fe OKC
Pr W5JGC James Buchannan 495-2777 VP WA5HTL Paul Asplin (Bus) 521-2861 S/T N5ANG Mike Woods 528-3699	Pr KB5DK Laverne Hoag 329-7625 VP N5ABC John Stehr 364-8761 Se KA5GHJ Jerry Howard 364-3518	Pr WASBOX Bob Shaw VP WBSISO Wendell Cochran S/T WBSUIY Stan Van Nort
Ed W5JGC James Buchannan 495-2777	Ed AF5X Jess McKenzie 329-1543	Ed WB5UIY Stan Van Nort
17 TRI-CITY AMATEUR RADIO CLUB	18 GREAT PLAINS AMATEUR RADIO CLUB	19
MEETS: 7:30 PM First Monday of month. Location varies, see club section.	MEETS:	NOTE:
Pr WBSTFX Ben Gard 379-3112 JP WBSVPM Carl Cash 257-2243 S/T KASFD Nancy Haydon 379-6448	Pr WB5OVT Rod Ford VP WD5DFH Bill Reid Se WD5DFG Donna Reid Tr KA5FKV Gerald Bowman	CORA meets the fourth Thursday each month at American Red Cross 10th & Hudson (Back door) 7:30 PM ALL CLUBS should send 3 represent-
Ed W85TFY Pat Gard 379-3112		atives to every meeting.

EDMOND AMATEUR RADIO SOCIETY (2) 147.72/147.12

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

The EDMOND AMATEU'R RADIO SOCIETY meets at 2PM each third Sunday in the Science Building on the Central State University campus.

The February meeting was on the 17th and featured a 50-50 pot, and an excellent presentation on Message Handling and Traffic by Dee Mize, WD5HFR, our activities director. If you weren't there you missed a good one.

The March meeting will offer another 50-50 pot and a program on Net Operations to be presented by Jim Buswell, N5BEQ. Come on out! See you Sunday afternoon (2PM) March 16.

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

Annual elections were held at the regular meeting on Sunday Jan. 20. Results as follows:

Ken Stepp, WD5HXK Clarence Dollmeyer, N5BTI Roger Harmon, KB5QC Dee Mize, WD5FHR President Vice President Secretary/Treasurer Activities Director

Appointments

Howard Wise, WD5IDB, Emergency Services Coordinator

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

Do you want a strong, healthy, vibrant club? Of course you do. Well you can have such a club by doing just two things -- participate and bring in new members. We need emergency operators, field day operators, teachers, merit badge counselors, discussion leaders, net operators, builders, rag chewers, etc.. etc. In short hams doing all the things they like best. Come on in, the water's fine.

*** 147.72~-147.12 ***
BRING A NEW MEMBER TO A MEETING

Here's one from ye olde Vice President in charge of Vice. How about regular executive committee meetings on ten via ground wave after the skip goes dead? Our prexy could serve as net control and all members could listen in and contribute to the operation of the club.

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

An old axiom of publicity is that "first you have to do something." One suggestion offered is that we demonstrate HF & VHF operations to the public by setting up a field or QSO Party day at a local shopping center, conducting mock, emergency procedures, handling messages, etc. To do this we need a club banner or sign, among other things. Anyone out there have any materials or talent to contribute to this project???

EDMOND AMATEUR

RADIO SOCIETY 147.72/147.12

EARS, Choctaw & Shawnee will mail the C&E on Saturday March 29 at 9:00 AM. Okla City Red Cross, 10th & Hudson. Back door. Knock loudly.

> *** .147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

We failed to offer and pass a vote of thanks to the outgoing officers at our January meeting so here it is guys --

Howard Wise Past President Ken Stepp Past Vice President Bill Wright Past Sec./Treas.

Dee Mize Activities Direct Activities Director

THANKS FOR A JOB WELL DONE - YOU DONE GOOD

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

An Executive Committee meeting was held at the homme of Ken Stepp, our new Pres., on Sunday afternoon Jan. 27th. Ken outlined his proposed program for the new year which includes:

* doubling the club membership

* publicizing meeting programs in advance

* expanded field day operations

* development of an Edmond emergency system

* a summer novice class

* continuation of prize drawings at meeting

* operation and upgrading of the 72/12 repeater

Our thanks to Ken's wife for the coffee and some great tollhouse cookies.

> *** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

Don't know who brung you fellows but a big WELCOME!!! to three new members:



Ben Allen, K5IRO 101 W. Glenn Drive Edmond 348-4264

Advanced Licensed since 1957

Memberships: MORI

Interests: CW, QRP, Antennas

Equipment: HF & 2m FM

Charles Frodsham, KØAYS General

714 Pine Oak Drive Licensed since 1955

Edmond 348-4264

Memberships: ARRL

Interests: Charles has been inactive for about 20 years-

just getting back into ham radio.

Equipment: SWL



Bill McMullin, WD5EXY General 2011 Huntington Avenue Licensed since 1979 Oklahoma City 842-7537

Memberships: ARRL, Autopatch

Interests: CW, Antennas

Equipment: ????

EDMOND AMATEUR RADIO SOCIETY © 147.72/147.12

Howard Wise, President Ken and others met recently with Edmond's new Civil Defense Director, David Van Nostrand to extend the services of the Edmond Amateur Radio Soceity to our local civil defense effort. Howard reports that they were well received and that a firm disaster program is being formulated. We understand that the program will include a basement located (tentative) emergency operations center downtown, check and control points for incoming assistance from outside our community, and probably a communications net which will include amateur radio as one of its facets.

Sounds like there will be plenty of opportunities to serve. David and Howard aren't ready to go public yet but we will be hearing more later. In the meantime how do we go about getting emergency power for the repeater????

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

President Ken, WD5HXK, popped for a new rig - an FT101Z with lots of bells & whistles. However, old man Murphy was on hand to enforce his laws and the rig had to go back to the shop. So Ken is now jamming the airways with a loaner TS820S digital. Tough duty! LATE BULLETIN: Vice President Clarence, N5BTI finally got his TS520 back from Ken Wood after two round trips to California for repairs. Works like a charm now.

One recent evening your scribe witnessed two of our local digital genii struggled valiantly over a 2m synthesizer. When last seen they were still probing and watching a very dull movie on the tube with much "Hmmm" and "wonder what's going on here?" Did you ever get it going Bill and Howard?

Congratulations to Roger Harmon, KB5QC, on his new call.

Past President Howard Wise, WD5IDB passed the 20wpm code on January 8 and V.P. Clarence Dollmeyer upgraded to advanced at the same session.

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

Did you ever wish you had a complete file of QST running back many years so you could look up the articles or circuits you read about??? Sure you have. But who has such a file. YOU DO!! The Oklahoma County Library has QST from some time in 1934 to the present date. The current three (3) years are in paper form. From there back they are on microfilm.

True, you can't take them home or tear them up. But you can request an issue, or a years issues, from the Edmond Branch Library.

The magazines or microfilm cassettes you request will be sent to the branch in a week or ten days after you request them and can remain at the branch for your use for ten days. So next time you need a back issue of QST, try the Edmond library.

*** 147.72--147.12 *** BRING A NEW MEMBER TO A MEETING

LATE BULLETIN ----!!!----Ken anted up for an FT101ZD instead of the plain "Z" model ---- sounds great. Guess he got tired of waiting for the shop to come through.

73 DE NSBII CL

Shawnee Amateur Radio Club



WSSXA

MEETS: 8:00 PM, 2nd & 4th Tuesday Shawnee City Hall. EOC Pres John Owens WB50NL 273-0848 VP Les Stewart WB5FUG 567-3895 Sec/tr Bill Warren WB5TZQ 275-0119

CLUB EDITOR Jay Tingler, WD5BUQ

HI-AMP MAKERS: There has been a lot of interest lately in building high amperage 12 volt power supplies. About seven or eight that I know about are in various stages of completion - from parts gathering to on-line. It is very interesting to sit around the two-meter after supper with my feet up, sipping on a good cup of brew, etc and listen to the discussions going back and forth about all the exciting problems encountered in putting these things together. I've added to my vocabulary by doing so. Terms like "ovp", "foldback", "current limiting", "airflow on the transformer as well as the heatsinks" - a lot of stuff like that. Some pretty neat ideas have come out of these projects, too. One builder has decided to put butterfly nuts on his power transistors to facilitate the rapid exchange of new for blew. Funny thing; noone has yet come up with anything to load these units with. I suppose that one day we will see allot of new gear around - TS 120s, TR/DR 7s and the like but right now the biggest load to be found appears to be a string of auto headlamps. Someone did mention building one of those N5MS "Amp Eaters" from a few issues back. Well, anyway, there are enough successful units on line now that I might as well go ahead and build one. Hope it's not too complicated though; I don't get along very well with that technical stuff.

ATV IN SHAWNEE? Maybe. Some of the bunch have been talking about ATV for some time now and it seems likely that someone is going to do something about it. Or at least they are talking a good game.... On Thursday evening, 14 February, last, Bill WB5TZQ, Norman KB5KS, Jerry WB5ZOG and Dean N5BEZ all piled into Norm's turbo-enjected, Porsche-powered, flat-out, Indy-qualified, VW micro bus (I think you scared them, Norm) and raced up to Edmund to visit with the ATVES. I understand they had a very enjoyable emening and wish to publicly thank Jim W5JGC for making them feel welcome; Bill K5SKA for the talk-in; Hutch K5SUD for the equipment display; and Marvin K5HQP (and others ?) for the refreshments. Hope I got all that right fellows - and thanks again.

X-RATED TRAFFIC? Understand that one of our out-lying members has some recent experience with boy friend to girl friend amateur radio grams. Seems the addressee refused the traffic when she heard who it was from, however. I think you are not supposed to include the heavy breathing, Ron.

GROWTH NOTE: I don't have any accurate figures - just impressions - but I think there are a lot more people attending the regular meetings of SARC lately. Seems that a couple of years ago it was rare to have ten people attend. Now, twice that number is not unusual.

NEW EC: As reported last time, Earl Couch, WB5ZBA will be the new Emergency Coordinator for Pottawatomie County. He is busy establishing his organization and getting ready for future operations. There will be much more on this in future issues. We note with more than casual interest the renewed ARES activity in Oklahoma County under Bill Skipper, KB5BS, and look forward to possible inter-county coordination of operation and training.

NEW HAM: A vistor at our last meeting was Billy Burch, K5PLQ from down Houston way. Understand he and his XYL, WB5PX(?) will be living in Shawnee and we want them to feel welcome to the community. Glad you're here Bill!

<u>NEW SHACK</u>: Every ham should build at least two shacks. I have recently moved from "the little building out back" to a room built into the corner of the garage (thanks to Bill, Herb and Earl for the furniture hawl). It's really a sort of annex to the laundry room which is sort of an annex to the kitchen. Anway, the difference is quite striking. I can keep up with the goings-on in the house while hamming... a new experience for me... and the family gets some exposure to amateur radio. I like it?

SWR PARTY: Cold as it was, we did it anyway. Sunday, 17 Feb a group met at Bob Barton's out by Shawnee Lake to erect one J-pole and one eleven-element beam so that he will have at least some 2-meter capability if and when the FCC sees fit



to send him a license. (It's only been since Nov 79?). Well anyway, the wind was cold, the coffee was good, the push-up mast was busted, the antenna relay didn't work, Bob's hands got cold, but we did it anyway!! Good luck, Bob. Hope to hear you on the air soon. Bob wants to thank WB5ZBA, WB5TZQ, N5BEZ, WD5BUQ and Les, WA5DZM, (Remember, it is difficult to soar like an eagle when you have to work with a bunch of turkeys.)

UPGRADING? The WIAW Schedules make excellent code practice. In addition to the multi-speed practice sessions scheduled nightly, there are the bulletins at 18 WPM. They are excellent quality signals (until some XE1... tunes up on top of them) and not only provide a good opportunity for code practice but some (sometimes) useful information.

FROM THE OLD PHILOSOPHER: Man was endowed with six senses; sight, hearing, smell, taste, touch and horse. Many have succeeded without one or more of the first five. Few have survived long without the latter. 73,

FOR SALE: Tempo S-1, TTP, Case, Rubber Ducky - \$265. Bill, WB5TZQ, 275-0119, SHAWNEE.

SHAWNEE, Choctaw & EARS will mail the C&E on Saturday March 29 9:00 AM. Okla City Red Cross, 10th & Hudson (Back door) KNOCK.

FOR SALE SWAN SS200A HF TRANSCEIVER, 300 W PEP IN 150 W OUT, WITH PS 20 POWER SUPPLY AND 610X CRYSTAL CONTROL UNIT CONTAINING 7 AMATEUR AND 3 AF MARS CRYSTALS. \$750.00. HARRY WATTS, WB5DGT, VICI OK, OR CALL CHARLIE, WA5JGU FOR INFO.

FOR SALE REGENCY HR-2B, 12 CHANNEL 2M FM TRANSCEIVER WITH CRYSTALS FOR 94/94, 34/94, 28/88, 22/82, 16/76, 76/76, Ø7/67, 13/73, Ø1/61, 52/52, 75/15 AND 63/Ø3. \$225.ØØ. HARRY WATTS, WB5DGT, VICI OK., OR CALL CHARLIE, WA5JGU, FOR INFORMATION.



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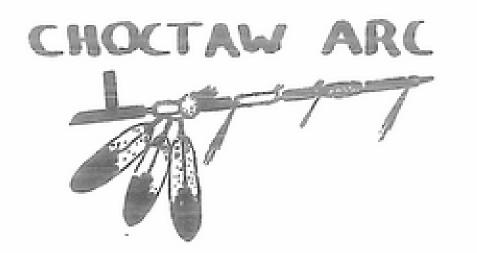
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MEETS: 7:30 PM 2nd Monday. Woods Community Baptist Church, SE 29 & Choctaw.

PRES Frank Carter AB5H 391-3394

V-P Bob Allen WD5EVP 632-1708

SEC/CLUB EDITOR June Allen N5ARV 632-1708

R. G. Edwards KA5ALO 390-8297

The Choctaw Amateur Radio Club met, 7 P.M., February 11, 1980 at the Woods Community Baptist Church. The meeting was called to order by Frank, AB5H. Self introductions were made. The Club wishes to extend a warm welcome to W5AZO, Sandy and his XYL along with WA5DZM, Les who were guests at the meeting. We hope they will honor us with many more visits.

TO

Minutes of last month's meeting were approved as read. The report of the Treasury was approved as read by Richard, KA5ALO. A report on the latest CORA Activities was given by Club Representatives.

Booklets were distributed to the membership by Frank, AB5H concerning severe storm watch. He attended Skywarn Training Seminar and reported that he was highly impressed and urges all amateurs to make an extra effort to attend one of the seminars.

A short break was given for coffee and donuts. The club wishes to thank Mack, W5WZM for furnishing the donuts.

At this point the meeting was turned over to Frank's lovely wife, Barbara, who gave a very informative lecture on crystal growth from a seed to the finished product which is used in amateur equipment. She had displays of crystals before and after sizing and explained the process for making them resonant at a particular frequency. Those members not in attendance missed a great time. The Club would like to extend a special invitation to the Club YLs to attend our meetings which are held the second Monday of each month at 7 P.M.

Chain Pulling --

EOS--Enjoys painting tee shirts

ALO--Keeping EGQ straight, if possible

UKP--Likes to ice skate mobile

EVP--Took den over for ham shack .

ARV--Wants YL participation on 2 meter SSB

WZM--Finally exercising 09

KZV--Has cat help him build dish antenna

ITV--Needs amplifier

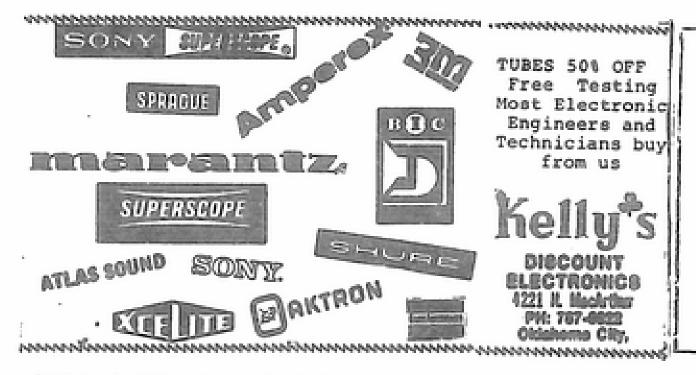
AZP--Wants more coffee breaks

FIJ--Has doorbell that barks

AB5H--Enjoys CW and Skoal

73 - N5ARV

CHOCTAW, EARS and Shawnee will mail the C&E on Saturday March 29. 9:00 AM. Okla City Red Cross, 10th & Hudson (Back door) KNOCK.



WORLD WIDE ELECTRONICS
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OKLAHOMA CITY, OKLA.

73106



MEETS: 2:30 PM / Sunday. Location varies. See Text.
PRES Ted Vanlangham WB5JNT 262-1675
V-P Ray Barnes AB5Z
SEC/TR Ralph Wilder WA5PFK 623-5421.

CLUB EDITOR Virginia Beneda, WB5WTH, 825-3302

On February 3, 1980 the "Dear and Gentle People" of the Wheatstraw ARC beat Cupid to the draw and straight as an arrow they pierced the heart of the Gold Room in El Reno. We were honored to have several guests and especially appreciate Mr. Larry Mooney WB5PWY from the National Weather Service for a fantastic program. So fantastic in fact the afternoon almost ran into dark-thirty before everyone made a homeward retreat.

WB5JNT called the meeting to order and had the 38 in attendance introduce themselves. (Shouldn't the president have passed out chocolates?) Minutes were read and approved, then the good stuff began to happen. K5GGL made a report on the last CORA meeting, and said CORA was asking for a commitment from all affiliated clubs to back Ham Holiday financially. It was agreed about the only cause for a financial shortage would be due to the lack of a well rounded program. He also reported the Wheatstraw ARC fell heir to the responsibility of the technical programs, so a dozen red roses to you fellows on the committee; that would be "Down the tube, Tillie" time for me. The increase in C&E dues was discussed and a motion was made for the secretary to write for a clarification. WA5FLT gave an interesting report on the Repeater Society meeting in Woodward. They have a project pending to list the names, frequencies, and locations of all repeaters in the state. Quite intersting and worthwhile, don't you think?

Thanks to special guest Mr. Mooney WB5PWY many operators are now more familiar with what warning signals to look for in inclement weather - VERY sorry I missed this one. Any one else for a re-run? I understand that all danger signals are not necessiarly obvious unless you are acquainted with what to watch for, and this presentation with pictures and film is excellent. Also included were precautionary personal protection measures, and the importance of storm spotters to assist radar protection. Thank you Larry for this service above and beyond the call of duty.

Refreshment break was spotted in with the program by Venus, YL of WB5JNT. With a star like that in the house surely his theme song is "You Light Up My Life" Huh. Ted!

Ralph WA5PFK is net control for February, and Jim K5VRL is attending to arrangements for our neXt meeting in Oklahoma City at the Bonanza - 23rd and Council Road. Ummmmt Sounds like a place to eat so it might be fun to circle-up early and have lunch together. Tune in on Wednesday nights 01-61 @ 8:30 to see if anything of this nature develops.

SEE YOU MARCH 3

Will it be a Lion or a Lamb?

73 - WB5WTN reporter



MEETS: 7:30 PM 3rd Thursday of month.
Security Bank Basement, Ponca City
PRES Chuck Willis WB5DOT 765-5366
V-P C. L. Hallmark W5ZWM 762-8620
SEC/TR Jay Williams W5TXF 765-9440
CLUB EDITOR Chuck Willis, WB5DOT

What!!! Another deadline is upon me again. Our January club meeting was attended by about 14 members and one guest. After the usual reports on past business and finances, we discussed the new 22/82 machine operated by Grady Skillern, WB5SAG. The club voted to use the 22/82 machine as a backup rig in case of failure of 37/97. This will add substantially to our emergency communications preparedness. We then had a program on emergency communications that was obtained from the ARRL. In case you haven't noticed, the autopatch access codes were changed to encourage the club members to stay current on their dues. Jay Williams, W5TXF, can supply the new access codes.

This last weekend I was fortunate enough to go through an expanded Skywarn Seminar presented by ARES and Larry Mooney of NOAA, conducted in Oklahoma City. I found the program to be extremely informative, with much additional material being presented. My hat's off to the OKC group for their excellent program. Larry Mooney of the OKC NOAA (Weather Service) will be presenting the spotter training program on March 5 in Blackwell at the Chamber of Commerce office at 120 S. Main at 7:00 PM. I would like to see a good representation from the Kay County Club at this meeting. As most of you are aware, our working relationships with the CD operations outside of Ponca City leaves a lot to be desired, and this will be an excellent opportunity to establish a good working relationship with all of the CD operations in Kay County and make them aware of our availability.

With the spring season upon us again, it would be wise for all hams to get their house in order, so to speak, so that we can be ready when needed. It's no fun to discover your mike cord has an intermittent break or your ni-cads only hold a charge for 20 minutes when you are in the middle of a thunderstorm on a lonely road. You may be ready, but is your equipment???

Enough of my rambling for now. I will say 73 and hope to see you at our next meeting and at the Blackwell meeting.

Chuck WB5DOT

	Kay County Amateur	2M Net Operator Schedule	March 1980
Date no.	Primary	Backup	
03/03/80 163	WD5ACK	N5EO	
03/10/80 164	W5ZWM	WA5UBO	
03/17/80 165	WB5JYC	WB5DOT	
03/24/80 166	N5EO	WD5ACK	
03/31/80 167	WA5UBO	W5ZWM	
04/07/80 168	WB5DOT	WB5JYC	
04/14/80 169	WD5ACK	N5EO	
04/21/80 170	W52WM	WA5UBO	
04/28/80 171	WB5JYC	WB5DOT	

FOR SALE - Heath 2021 Handi-Talkie with Heath Autopatch TT and XTALs for 37/97,34/94,28/88,16/76,52/52. Only recieve xtal needed for any pair. Excellent condition, no scratches ect. Includes charger new ni-cads and all manuals. Very similar to current Heath HT. I will deliver within 100 miles. \$100.00 Chuck Willis WB5DOT 1704 Leslie Lane, Ponca City, Ok 74601 (405) 765-5366

FOR SALE - 4 element 6M Hygain Beam (#230). Excellent Condition \$25.00 Chuck Willis WB5DOT, 1704 Leslie Lane, Ponca City, Ok 74601 (405) 765-5366

THE AMERICAN RADIO RELAY LEAGUE, INC.



THE SKY WARN SEMINARS HAVE BEEN WELLRECEIVED THROUGH OUT THE STATE. WE ARE DEEPLY INDEBTED TO LARRY MOONEY FOR HIS WORK IN PRESENTING THESE. HE HAS WORKED NIGHT AND DAY AND GIVEN UP WEEK END FREE TIME TO PUT THESE ON. ALL THIS AND WITH A NEW BABY IN THE HOUSE. ALSO. OUR THANKS TO DON, AE5N FOR HIS WORK IN COORDINATING THE SATURDAY SESSIONS OF SKY WARN TRAINING.

THERE HAS BEEN SOME "PRO & CON" DISCUSSIONS ABOUT THE NEW ARRL FORM CD-3 S THE NEW LIST OF NUMBERED RADIOGRAMS. I HAVE BEEN IN TOUCH WITH LEAGUE HQ'S ON THIS. I HAVE BEEN TOLD THAT THE NEXT ISSUE OF "QCD", THE QUARTERLY PUBLICATION FOR LEAGUE APPOINTEES, WILL HAVE MORE INFORMATION ABOUT POSSIBLE RE VISIONS. READ YOU QCD AND EXPRESS YOUR OPINION.

OUR THANKS TO THE CREW THAT WORKED UP THE NEW REPEATER MAP. JUST WISH WE HAD AN EVEN LARGER DISTRIBUTION THROUGH OUT THE STATE. MAY BE SOMETHING CAN BE WORKED OUT. TIME WILL TELL.

TO ME, ONE OF THE NICEST FEATURES, AND HANDIEST, OF THE C. & E. IS THE CALENDAR ON THE BACK COVER, LET'S KEEP UP THE GOOD WORK, AND POSSIBLE EXPAND IT.

FROM TIME TO TIME, I RUN ACROSS AN OPERATOR WHO HAS NEVER HANDLED ANY TRAFFIC ON AMATEUR BANDS. I HAVE CONSIDERABLE INFORMATION ON HOW TO PREPARE AND SEND MESSAGES, THAT IS READILY AVAILABLE. I USUALLY HAVE SOME WITH ME AT MEETINGS, OR WILL SEND IT TO YOU. JUST LET ME HEAR FROM YOU.

OKLAHOMA NET REPORTS FOR JANUARY 1980:

NET.	SESSIONS	QNI 265	QTC 15	WX
0.P.E.N.	27	581	86	
SOONER		mark .		
0.F.0.N.	23	469	95	
O.T.W.N.	27	543	19	320
0.L.Z.	31	227	52	
O. A. N.	31	215	36	
NIGHT OWL	31	664	49	
N.W. OKLA.	13	147	2	
MUSHOGEE	31	543	2	
POTT。 CO.	4	72		

THE LAST 4 NETS ARE LOCAL NETS. THE OTHERS ARE THE REGULAR STATE NETS. AS YOU CAN SEE. THE 2 C.W. NETS CAN USE MORE PARTICIPATION. LEONARD HOLLAR WASFSN



CORA Collector & Emitter

March 1980



CLUB EDITOR George Lee, WB5NMK, 946-2754 MEETS: 8:00 PM First Tuesday of month Okla City EOC, 4600 N Eastern Pres Fred Taylor KA5CXW 528-1537 WB5PWZ Bob White 681-9222 V - P Jim Buswell Sec N5BEQ 236 - 0368 Tres Jim Jones K5 PER 634-5235 Dues: Sid Gerber, 829 Bouse, WMC 73110

There was some confusion at our February meeting because of a change of rooms for us at the E.O.C. Come to find out, they were hosting another group, overnight, or something, and the regular room was being used as a "dorm". We met in a smaller room that was filled to overflowing, with extra chairs, people standing on the sides, and in the hall. Now we know what a sardine feels like.

President Fred convened the meeting at 8:00, with self-introductions, etc. There were sixty-four people counted, with a few more coming in later. Hope their bunions and corns didn't give them too much trouble. V.P. Bob introduced Bill Skipper for "Sky-Warn" announcements, requesting all available, or interested, to join up. He passed out "sign-up" forms, and other literature, also. From the way he talked, this is a worthy project, and could result in some lives being saved. Certainly, this is a "plus" for Ham Radio. I understand that this is part of a nation-wide effort. Bill is Okla. County Emergency coordinator for the project. Regular meetings will be held at the Red Cross on every third Monday of each month. See your Feb. C.&E. for all details, etc.

Jim Buswell gave details of a Nite Owl swap meet that I believe he originated. Looks like a good chance for guys to save some money, obtain hard-to-get parts, etc. No discussions of price or business are allowed by the F.C.C., but the availability of the items can be mentioned. The "swappers" can get to-gether, or communicate by other means for business details. Good deal, I think.

The Treasurer's report was given. Treasurer Jim did not present a complete report because he doesn't get the bank statement in time to reconcile it with his books. There was motion made about this to accept Jim's book balance, and there was quite a discussion. There was another motion made to install a double-entry bookkeeping system. However, all the discussion was just a little confusing to me, and apparently to others. A committee was appointed to iron the problem out.

Coffee and "dunkers" break was called at 8:35, with the meeting reconvening at 9:00. The announcement was made that the new 07/67 repeater had been shipped. This ought to get rid of some of the "insects" that have been bugging our present machine. This machine has given good service, but the years get away too fast.

There was a motion to buy a watt meter from the late Wayne Hogan's wife to be used on the 07/67 machine. Motion passed. This a good and high-quality intrument, and I understand there is a mate to it available when we want or can afford it. We still miss Wayne around, he was a real gentleman--and, largely responsible for the installation of our early repeater equipment.

Fred suggested using 34/94 more, to take the load off of 07/67. He also recommended talking on direct frequencies where possible. There was a suggestion of a bonus month's membership in exchange for early payment of dues. However, This was not considered practical. Mac announced some new repeater developments. including the use 15 KHz. splits. He, also, discussed some repeater problems. Ken Ford gave program discussion on the new 07/67 machine that was interesting. Jim Buswell suggested another card raffle at Ham Holliday, with proceeds to be used for the new C.&E. printer. Last year's proceeds were not enough. It was further suggested that hams not be so fast with their mikes. They don't give the repeaters enough time to switch. Sometimes some words are lost - also, give a "breaker", I mean another party, a chance--you might like what he has to say. We dismissed at 10:00. Good meeting!:

REGARDS, George WB5NMK



ABOUT AUTOPATCH

Mark WB5SLA

Autopatch is a confusing subject that is brought up many times. Well, here we go!

I am continually being asked what types of calls are "legal" for autopatch. I wish I knew. Sometimes, I wonder if the FCC knows. To the best of my knowledge, there are no regulations dealing specifically with autopatching.

However, we have rules concerning Prohibited Communications, Station Identification, Third Party Traffic, and the list goes on and on.

Okay - first we have Prohibited Communications with things like rules concerning oneway transmissions and broadcasting which really do not concern us here.

However, Business Communication does concern us. As most of us know, these types of communications are strictly prohibited, otherwise, we might be called the Professional Radio Service.

One type of Business Communication which some of us fail to realize is carrying out routine activities of a church or some other non-profit organization. Also, government sponsored welfare programs such as meals for the elderly. I have heard people calling in on autopatch to report they were finished delivering a meal and inquiring as to where the next one should go. These services are very good and useful, however, these communications are not allowed.

Station Identification: we all know what a legal identification is, or do we? Listen in on some of the repeaters! It does not sound like all are aware of this procedure.

The rules state that you are to identify your station at the beginning and end of each transmission or series of transmissions of a period not to exceed 10 minutes in length. Furthermore, you are to state the call sign of the station you have been in communication with or one of the stations in the group, such as the net control station at the end of each transmission or series of transmissions of a period not to exceed 10 minutes in length. Each amateur is assigned a call sign printed alphanumerically, not phonetically, on his license. Remember phonetics are authorized only after your call has been stated as it was printed on your license. Phonetics were devised to assist in assuring the station you are in communication with that he copied your call correctly where QRM is a problem. When you identify your station, a call copied wrong usually is due to QRM, or mispronounced letters such as the case on FM where QRM normally is not a factor.

The complete call must be announced. Announcing the last 3 or 4 characters is not a legal identification in any case, including emergency or net operations.

Finally, Third Party Traffic Regulations. I do not know the answer to this one but here are some comments. Let's see what you think.

In the Rules, Third Party Traffic is amateur radio communications by or under the supervision of the control operator at an amateur radio station to another amateur radio station on behalf of anyone other than the control operator.

Most autopatch calls I make are on behalf of myself, the control operator of my station. The same goes for most calls I hear, their being on behalf of the control operator. But what about when you call your wife to tell her you are going to be late. In whose behalf is this communication? What if she asks you to pick up something at the store - whose hehalf here? March 1980

Is this type of communication what the FCC had in mind when they wrote Third Party Traffic Rules? I don't think so.

But if you place an autopatch call for your friend to his wife while he is in your car or station, and either he talks to her or you give her a message for him - this is definitely Third Party Traffic.

Reporting traffic lights out or accidents can be on the behalf of the control operator as well as other people. Is this what the FCC had in mind - probably not.

The way I see it - Third Party Traffic would be passing messages, both formal and informal, for someone other than the control operator who is placing the call.

So remember - if your autopatch call is not in your behalf, be sure and log it as Third Party Traffic.

Food for Thought! If you have thoughts or comments, write them down and send them to your club editor for printing in the C & E. In the meantime, what do we do? Who knows! If in doubt, don't. In all your amateur operations, keep in mind the difference between operating like a lid and utilizing courteous and good amateur operating procedures.

73

The February meeting was called to order at 7:55 pm by Prez Fred, KA5CXW, with 69 members and guests present.

The minutes of the January 'meeting(?)' (the roast, remember?) were approved as if published in the February Collector and Emitter.

The Treasurer's report was approved as read.

In the way of New Business, it was moved, seconded and passed that the club purchase one of the Bird Watt Meters from the Estate of Wayne, WASAOB, to be put in line on the 07/67 repeater.

It was moved, seconded and passed to require the club's

Treasurer to establish a set of double-entry ledgers of the Treasury with continuing balances, with a vote of confidence for Jim, K5PER.

It was moved, seconded and passed to support CORA in

holding a raffle during Ham Holiday 1980 provided the proceeds are earmarked for Collector and Emitter equipment.

It was moved, seconded and passed to support HH80 in accord with the CORA Constitution.

Announcements: volunteers were (are) sought to launch a membership campaign, none surfaced.

Skywarn training sessions were reannounced held 9, 16 and 23 Feb with approximately 45 attendants (which will have become history by the time these minutes are published). The Oklahoma Nite Owl Net Swap Meet

Ground Rules Wednesday Nites were explained to great length: only Amateur gear, 2. transmission of station's surname, address and phone numbers are at the risk of the sender, 3. contacts may be made on the net but deals are to be consummated elsewhere (another frequency, telephone, mail, face-to-face, etc.). Neither MORI nor NCS assumes any liability nor responsibility!

After a 15-minute break for refreshments, the program starred Mark, WB5SLA, and Ken, K5VVZ with handouts and descriptions of how 'K5ELL/RPT' works.

The meeting adjourned to the 'aftermeeting at 9:30 pm. Next meeting, 4 March, EOC, 8 pm, surprise program!

Jim, N5BEQ Secretary



NOTES FROM THE PRESIDENT

We've had a great two months so far, with lots of sun... antenna erecting weather..... See lots of "New" 2 meter sideband units popping up on the band, and long boomers being installed. Understand Chuck N55W erected his at 9:30 one night.

Last meeting was successful though, held in two rooms --- one group was having refreshments while the other group observed your president holding a meeting in a room half as small --- won't happen again, I hope. Hardline was being obtained last month by many hams who followed the the cable TV installers and obtained the surplus discarded reels. Some reels had as much as 150 ft. left on the roll, free for the asking.

At the time of makeup for the C & E, we were notified that our new 07-67 repeater has arrived, and will be under test for several weeks for short periods in the evening. We will be using "WR5ADF" for the call sign during the extended test and shakedown while at K5VVZ's house. Please bear with us. Naturally, we will not have autopatch during these periods in the evening, but we will of course, be back on the K5ELL repeater for daytime hours and during the Night Owl Net until the repeater is installed on the Channel 4 tower.

KA5CXW Fred

Thanks to all those who shifted frequencies from 146.07/67 to 146.34/94 in preparation for the period when our new repeater will be under test. The duty cycle on our fine 07/67 machine has become increasingly heavy with attendant, COR problems becoming evident. Marks (WB5SLA) article was particularly appropriate in February C & E. I'm looking forward to more of his fine articles.

Our local ham stores are stocking up on magazines such as QST, CQ 73, Ham Radio, and Ham Radio Horizons and ARRL publications. Drop by and visit these stores and get acquainted and keep up with our rapidly changing hobby.

Let's keep our repeater the friendliest in town. We need your support to continue to be helpful and courteous. Unsolicitied criticism of a persons signal whether on HF sideband or VHF is not always gratefully accepted and may lose us a friend. Remember, the most courteous break on frequency is your call sign, and then please wait to be recognized and wait for the squelch tail to drop before keying up again.

We hope all newcomers to Oklahoma City, that use our repeaters help us support Mid-Oklahoma Repeater. We continue to improve our equipment, thanks to K5ELL Merwin, K5VVZ, Ken WB5SLA Mark and others (07-67 repeator) and K5VRL, Jim K5JB Joe, WA5EAI Ron and others maintaining the 34/94 and 444.1 VHF repeaters. If you regularly use our repeaters, and need membership information call our friendly membership chairman Sid Gerber - 737-1050. Our dues remain \$12.00 per year, family membership is \$13.00 (a dollar more)..... best investment in town.

TEMPO - S-1, 2-meter Syn. handie talkie, with belt clip, rubber duckie, charger, earphone. \$300

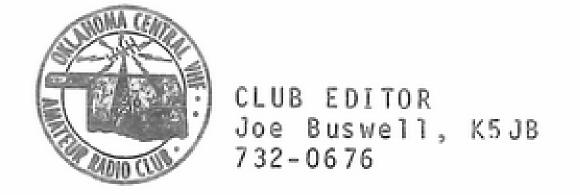
KLM 2 meter Linear Amp - 2 watts in 70 watts out. \$145

LARSEN Mag mount 2 meter ant. \$25

James Gardner, KA5DHF Home - 321-8779 Bus - 631-8821

HELP: I need any plug in coil assembly to fit my National Radio HRO-7 receiver. Please write to: Mike Hunton, WA5PSE, 1109 Gil Ave., Charles City, Iowa 50616 (515)228-5215.

FOR SALE: TRS-80 Level II 16K with many programs asking \$700.00 or make offer. Call Bill KB5BS 733-0889



MEETS: 8:00 PM Third Friday each month American Red Cross, 10th & Hudson OKC PRES Jim Williams K5VRL 789-0769 V-P Clarence Sittel K5YAQ 947-4015 SEC Joe Buswell K5JB 732-0676 TREAS Ellard Foster W5KE 789-6702

MINUTES OF FEBRUARY MEETING

MEETING WAS CALLED TO ORDER AT 8 PM BY PRESIDENT JIN, K5VRL, WITH THIRTEEN MEMBERS AND GUESTS PRESENT.

KEN, WB5KHU, REPORTED THAT APPLICATION FOR RENEWAL OF THE CLUB CALL, W5LOW, HAD NOT BEEN ACTED ON YET BY THE FCC. RENEWAL OF HIS LICENSE WAS COMPLETED BUT NOTHING HAD BEEN HEARD ON THE CLUB LICENSE. NO PROBLEM WAS ANTICIPATED AND THE APPLICATION WAS MADE IN A *TIMELY* MANNER SO THERE IS NO REASON TO NOT OPERATE THE STATION UNTIL NOT-IFIED DIFFERENTLY BY THE FCC.

ELLARD, W5KE, ASKED IF THE CLUB WOULD BE IN FAVOR OF A RAFFLE DURING HAM HOLIDAY TO RAISE MONEY FOR COLLECTOR AND EMITTER. IT WAS MOVED AND PASSED THAT THE CLUB SUPPORT SUCH A RAFFLE.

PAUL, WASHTL, BROUGHT UP THE MATTER OF UNDERWRITING HAM HOLIDAY ON A PRO RATA CLUB MEMBERSHIP SIZE BASIS AMONG THOSE CLUBS SUPPORTING THE EVENT. IT WAS MOVED AND PASSED TO PROVIDE SUCH SUPPORT.

SOME GENERATORS HAVE BEEN MADE AVAILABLE TO CLUBS TO USE FOR EMER-GENCY POWER. THE PRICE IS GOOD BUT THE CLUB VOTED NOT TO ADD TO OUR INVENTORY OF GENERATORS AT THIS TIME.

IN OTHER ANNOUNCEMENTS ...

GREAT PLAINS AMATEUR CLUB IS THE NEWEST MEMBER OF CORA.
PAT, N5PS, IS LOOKING FOR VOLUNTEERS TO LEND TWO METER PORTABLE SUPPORT TO A MOTOCROSS BEING HELD IN THE VICINITY OF DRAPER LAKE ON JUNE 1.

AT ST. LUKE'S METHODIST CHURCH, NW 15TH AND HARVEY, FEB 27 AT 7:30 PM, THERE WILL BE A PROGRAM TO FAMILIARIZE EXPLORER SCOUTS WITH ARES AND OTHER EMERGENCY ASPECTS OF AMATEUR RADIO. THOSE INTERESTED IN THE SHOW AND TELL SHOULD CONTACT FRED, KASCXW.

THE COAST GUARD AUXILIARY IS SPONSORING BOATING SAFETY SEMINARS TO BE HELD AT COMMUNITY NATIONAL BANK, NW 39TH & MACARTHUR, ON THURSDAY EVENINGS. CONTACT NATHAN, KB5BF, FOR DETAILS.

BOB, W5HXL, ANNOUNCED THAT JOE, WA5ZNF, HAS ACQUIRED A MULTILITH MACHINE FOR PRINTING THE COLLECTOR & EMITTER. BOB, WB5NSV, IS WORK-ING ON A PHOTO ENLARGER. EVENTUALLY C & E WILL BE SELF SUFFICIENT AGAIN. I BELIEVE THERE ARE POSITIONS AVAILABLE FOR PERSONS TO OPERATE THESE MACHINES. SEE JOE.

PRESIDENT JIM PRESENTED EX-PRESIDENT KEN, WB5KHU A PLAQUE CITING HIS TERM OF OFFICE AND APPRECIATING HIS SERVICE. THANK YOU FROM ALL OF US KEN.

JIM, K5VRL, REPORTED THAT HE IS BUILDING A DUPLEXER FOR THE 96/36 REPEATER IN BYARS, BASED ON THE DESIGN IN APRIL 79 QST. HE WILL REPORT NEXT MONTH ON ITS PREFORMANCE.

JIM ALSO BROUGHT A NUMBER OF SPEAKERS TO THE MEETING THAT WERE HOME CONSTRUCTED IN 1926 BY P. P. BELT, FREDONIA KS. HE DISCOVERED THEM DURING A SEARCH FOR ANTIQUE AUTOMOBILE PARTS WHERE THEY HAD BEEN SETTING SINCE 1935 WHEN MR. BELT DIED. THERE WERE SEVERAL DESIGNS INCLUDING HORN DRIVERS AND ONE WHICH INCORPORATED CRANK TELEPHONE MAGNETS. THE MACHINING AND HAND CRAFTSMANSHIP WERE SUPERB. THIS REMINDED FRED TO MENTION THAT WALT WHITCOMB, W5DEC, RE-CONES SPEAKERS. HE CAN BE CONTACTED AT 524-4321.

MEETING WAS AJOURNED AT 8:45 SO EVERYONE COULD TAKE A CLOSER LOOK AT CORA Collector & Emitter -17-

MINUTES CONTINUED ...

THE SPEAKERS, SLURP SOME COFFEE AND ETC. JOE K5JB, SECRETARY

ONE NIGHT STANDS - TWO METER STYLE

MY PRESENT JOB AFFORDS ME THE OPPORTUNITY, LIKE THEY SAY IN THE NAVY ADVERTISEMENTS, TO SEE THE WORLD, WELL, THE UNITED STATES ANYWAY. I ALWAYS CARRIED MY SIX CHANNEL HT WITH ME AND NEVER WAS COMPLETELY UNABLE TO CONTACT SOMEONE. IF I COULDN'T HIT A REPEATER, I COULD DREDGE UP SOMEONE ON 52. WELL, ABOUT A MONTH AGO, MY CURIOSITY GOT THE BEST OF MY POCKETBOOK AND I SPRUNG FOR A YAESU SYNTHESIZED WALKIE TALKIE, THE FT207. IMMEDIATELY AFTER THAT I MADE A RUN TO NEW YORK TO TRY IT OUT. THE RESULT ... FIFTY SIX REPEATERS HEARD FROM MANHATTANS TWENTY SIX OF THEM WERE IN THE 146 MHZ RANGE, SEVENTEEN WERE IN THE 147 MHZ RANGE AND THE REST WERE IN THE 144/145 MHZ RANGE. THERE WERE SURELY MORE THAT I DIDN'T HEAR. I HAVE NO IDEA HOW MANY I MIGHT HAVE BEEN ABLE TO HIT BUT I TRIED A FEW AND FOUND OUT THAT I COULD HIT MORE THAN I KNEW WHAT TO DO WITH. I UNDERSTAND THAT THE GOAL OF THE REPEATER COUNCIL IN THE AREA IS TO GET A REPEATER EST-ABLISHED ON EVERY AVAILABLE REPEATER FREQUENCY. PERHAPS SOMEONE WAS USING THE PHILOSOPHY OF CHOKING THE DOG WITH A FIST DOWN HIS THROAT SO HE CAN'T BITE. ONE INTERESTING THING OF NOTE WAS THAT. WITH THE EXCEPTION OF THE 147 MHZ RANGE, NEARLY ALL OF THE REPEATERS WERE OPERATED WITH FREQUENCIES LOW IN HIGH OUT, EVEN SPLITS AND SPLIT - SPLITS. ANOTHER INTERESTING THING WAS HOW CLOSE THE REPEATER FREQUENCIES WERE TO EACH OTHER. FOR EXAMPLE THERE WAS A REPEATER ON 146.920 AND ANOTHER ON 146.925. OF COURSE, IT WAS IMPOSSIBLE TO AVOID HEARING THEM BOTH WHEN TUNED TO EITHER FREQUENCY BUT THE CORRECT ONE WAS ABLE TO PREVAIL. NO DOUBT, ONE WAS PROBABLY TWENTY MILES OR MORE IN ONE DIRECTION, AND THE OTHER AN EQUAL DISTANCE THE OTHER WAY. ONE OR BOTH MAY HAVE HAD SUB-AUDIBLE TONE TO ALLOW RECEIVERS TO USE CTCSS.

THE NEXT PLACE I WENT TO TO TRY MY NEW TOY WAS LOS ANGELES. I DIDN'T HAVE AS MUCH TIME TO PLAY WITH IT SO I ONLY LOGGED THIRTY THREE REP-EATERS FROM BUENA PARK, A SUBURB SOUTH OF LOS ANGELES. I HEARD ELEVEN IN THE 146 RANGE, FIFTEEN IN THE 147 RANGE, AND THE REST IN THE 144/145 RANGE. HERE THE REPEATERS ON FIFTEEN KHZ SPLITS SEEMED TO BE GENERALLY INVERTED. ONE UNUSUAL INVERSION WAS A 146.76/16. WHAT I MAY HAVE BEEN HEARING ON THESE FREQUENCIES WAS PART OF A LINK-ING SET-UP. IN MOST CASES, I DETERMINED INPUT FREQUENCIES BY TUNING FOR AND LISTENING TO THE STATION USING THE REPEATER. I CAN'T HELP BUT THINK THAT MOST OF THESE OPERATORS AREN'T USING THE SPECTRUM VERY EFFICIENTLY WHEN I CAN HEAR THE UPLINK OF ALL THE OPERATORS IN THE ROUNDTABLE. TRY IT SOMETIME ON THE LOCAL REPEATERS AND SEE WHAT I MEAN.

IN THE LITTLE TOWN OR SHARONVILLE OHIO, NORTH OF CINCINNATI OHIO, I ONLY HAD TIME TO LOG A FEW REPEATERS WHILE I WAS SHOWERING, SHAVING AND ETC. I COUNTED SEVEN REPEATERS AND I AM SURE THAT WAS ONLY A FRACTION OF THOSE THAT COULD HAVE BEEN HEARD. ONE THING I GOT A KICK OUT OF ON THE 16/76 REPEATER OF C. R. A. SYSTEM, WHATEVER THAT IS, WAS A RECORDED ANNOUNCEMENT IN A FAMILIAR VOICE THAT SAID, "HI THERE EVERBODY! THIS IS JIMMY COTTA. I HOPE Y'ALL ARE ENJOYIN THE WREACC REPEATA." A LITTLE WHILE LATER, THE VOICES OF ALFRED HITCHCOCK AND ANOTHER FAMILIAR PERSONALITY, WHOM I FORGOT, MADE SIMILAR ANNOUNCE-MENTS. THESE SEEMED TO BE TIMED AND CONTROLLED SO AS TO NOT INTER-FERE WITH CONVERSATIONS IN PROGRESS.

I ALSO WAS SHORT ON TIME IN HAZELWOOD MO, A SUBURB OF ST LOUIS, SO I ONLY LOGGED NINE REPEATERS. HERE I DID SOME KERCHUNKING AND HIT SIX OF THEM ON THE 200 MILLIWATT POSITION. NO QUESTION ABOUT IT, THE NEW TALKIE WILL BE A LOT OF FUN ON THE ROAD. JOE, KSJB.

SICK CALL

I HAVE JUST BEEN ADVISED THAT CARL, W5JJ, IS IN INTENSIVE CARE IN THE CORA Collector & Emitter March 1980 -18HOSPITAL AFTER SUFFERING SOME FAINTING SPELLS. I UNDERSTAND HE IS SCHEDULED FOR INSTALLATION OF A PACE-MAKER AND BY THE TIME THIS IS PRINTED AND MAILED, HE SHOULD BE WELL ON THE ROAD TO RECOVERY. CARL AND I HAVE WORKED TOGETHER TEACHING LICENSE CLASSES AND THERE ARE MANY AROUND HERE WHO WERE ABLE TO CRACK THOSE EXTRA CLASS EXAMS OPEN BECAUSE OF CARL'S HELP. HE IS KNOWN NATION WIDE BECAUSE OF HIS PRO-LIFIC WRITING FOR THE AMATEUR PUBLICATIONS. WHENEVER I MEET AN EDITOR AND INTRODUCE MYSELF FROM OKLAHOMA HE ALWAYS ASKS IF I KNOW CARL.

CARL, FOR THE INFORMATION OF YOU NEWCOMERS, WAS FOR MANY YEARS THE EDITOR OF THE ORIGINAL COLLECTOR AND EMITTER WHEN IT WAS THE PUBLICATION OF THE AERO CENTER CLUB. GET WELL CARL. I WOULD LIKE TO SEE AN ARTICLE OF YOUR COMPOSITION ON THE RFI CONSIDERATIONS AROUND PACE-MAKERS. JOE. K5JB

STORM SPOTTER SEMINAR

LAST SATURDAY I HAD THE PLEASURE OF ATTENDING ONE OF THE STORM SPOTTER SEMINARS BEING HELD BY LARRY MOONEY, WB5PWY, OF THE U.S. WEATHER SERVICE. HE HAS BEEN GOING ALL OVER THE STATE PRESENTING THESE THINGS TO CIVIL DEFENSE AND AMATEUR RADIO PEOPLE, ENCOURAGING DEVELOPMENT OF PROGRAMS TO GET TRAINED EYES OUT THERE AND REPORTING WHAT THEY SEE DURING SEVERE WEATHER. HE WAS INSTRUMENTAL IN DEVELOPMENT OF A BOOKLET PREPARED BY THE SOUTHERN REGION HEADQUARTERS OF THE NATIONAL WEATHER SERVICE DESCRIBING AMATEUR RADIO AND HOW IT CAN BE AN ASSET TO THE WEATHER SERVICE.

LARRY IS A VERY INTERESTING AND KNOWLEDGABLE PERSON. THE WEATHER SERVICE IS LUCKY TO HAVE HIM IN OKLAHOMA. HIS TALENTS WERE USEFUL, I'M SURE, IN CORPUS CHRISTI TX, BUT IN COMPARISON, THE WEATHER AROUND HERE GETS TO JUMPING IN THE SPRING TIME. I DON'T THINK THE AMATEURS AROUND THE STATE WILL LET HIM DOWN. JOE, K5JB

NOISE NOISE ... WHAT NOISE?

THE LAST FEW WEEKS THERE HAS BEEN A BUNCH OF SUSPICIOUS ACTIVITY DURING THE WEE HOURS AND WEEKENDS AROUND THE NORTH END OF TOWN. CARS
DRIVING SLOWLY DOWN THE SECTION LINES, STOPPING AND STARTING, TURNING
CIRCLES IN PARKING LOTS. FUNNY LOOKING ANTENNAS BEING HELD OUT OF
WINDOWS. PEOPLE JUMPING OUT, STANDING CLEAR OF THE CAR AND REVOLVING
IN CIRCLES WHILE HOLDING FUNNY LOOKING GEAR.

FOR SEVERAL WEEKS, MOST OF THE REPEATERS HAD BEEN SUFFERING VARIOUS DEGREES OF DESENSITATION FROM A WIDE BAND NOISE AND THESE PEOPLE WERE ENGAGED IN A SERIOUS TRANSMITTER HUNT.

ON VALENTINE DAY EVENING. A SMALL ARMY CONVERGED ON THE SUSPECTED AREA AND TOOK POSTS TO LOOK AND LISTEN WHILE A COUPLE OF STOUT SOULS BEGAN AN ASSULT ON THE CHANNEL 4 TOWER IN DISMAL WEATHER. AT THE STROKE OF MIDNIGHT. THE HEROS OF THE STORY WERE JERRY LOVE. NSABF. ENGINEER AT KTVY, BOB ABLAH, TRANSMITTER ENGINEER SUPERVISOR AT KTVY AND WILLARD HINES, W5ROU, ENGINEERING SUPERVISOR, KTVY. JERRY AND BOB WERE THE TWO WHO WENT UP THE TOWER. KEN, KSVVZ, AND MERWIN, K5ELL WERE AT THE TOWER SITE OBSERVING AND COMMUNICATING WITH THE VARIOUS LISTENING POSTS. MARK, WD5DYI, WAS AT HOME OBSERVING THE NOISE AND COMMUNICATING WITH THE GUYS ON THE TOWER WITH WALKIE TALK-IE ON THE COMPANY FREQUENCY. DEEDS, WB5ADN AND DENNIS, WB5ISN, WERE LISTENING FROM THEIR HOMES AND COMMUNICATING WITH ME ON UHF. RON. WASEAL, WAS IN MY VAN AT BRITTON ROAD AND KELLY HOLDING A DF LOOP OUT THE WINDOW ALL THROUGH THE ORDEAL. FRED, KASCXW, SHOWED UP AT MY CORNER WITH ONE OF THE MORI CLUB'S LITTLE ELPER DF UNITS. I UNDER-STOOD THAT CHUCK, K5NK, WAS ALSO PROVIDING REPORTS FROM HIS HOME. DENNIS COULDN'T STAND THE SUSPENSE SO HE DESERTED HIS POST AND JOINED THE GROUP IN MY VAN. I IMAGINE THE ONLY PLACE THE ONLY PLACE IN TOWN THAT WAS NOISER THAN MY VAN WAS MARK®S PLACE WHERE HE HAD REC-EIVERS TUNED TO ALL THE FREQUENCIES AND WHEN THE NOISE STOPPED OR STARTED. ALL HELL BROKE LOOSE.

AT APPROXIMATELY 2:30 AM, JERRY AND BOB PULLED A CIRCUIT BREAKER AT THE 1425 FOOT LEVEL AND THE NOISE STOPPED. THEY TRACED THE EQUIPMENT CONNECTED TO THAT BREAKER AND UNPLUGGED IT. DOWN THEY CAME, LOOKING FOR A DRY SPOT, I'M SURE.

I'M CURIOUS WHAT PROBLEM IN THAT TRANSMITTER WAS CAUSING SUCH A STRANGE NOISE. ON AN AM RECEIVER, IT SOUNDED LIKE A POWER LINE FRY WITHOUT ANY 60 CYCLE COMPONENT. IT SOUNDED LIKE FM RECEIVER NOISE WITH THE SQUELCH OPEN. IT WAS THIS CHARACTERISTIC WHICH MADE IT DIFFICULT TO TRACK. "S" METERS RESPONDED TO IT BUT SQUELCH CIRCUITS IN FM RECEIVERS TREATED IT LIKE NORMAL NOISE AND LEFT THE RECEIVERS QUIETED. THE ONLY EFFECT ON MOST RECEIVERS WAS DESENSITATION. THE RECEIVERS ON THE CHANNEL NINE TOWER HAD TO HAVE THEIR SQUELCHES TIGHTENED UP TO KEEP FROM "BLOWING SQUELCH".

I, AND SURELY MANY OTHERS APPRECIATE THOSE WHO WENT OUT THAT NIGHT TO TRACK THE PROBLEM DOWN, AND PARTICULARLLY THOSE TWO WHO GOT SOAKED ON THE TOWER. THERE WERE PROBABLY OTHERS WHO I EITHER FORGOT OR DIDN'T KNOW ABOUT WHO WORKED ON THE PROBLEM AND DESERVE OUR THANKS ALSO.

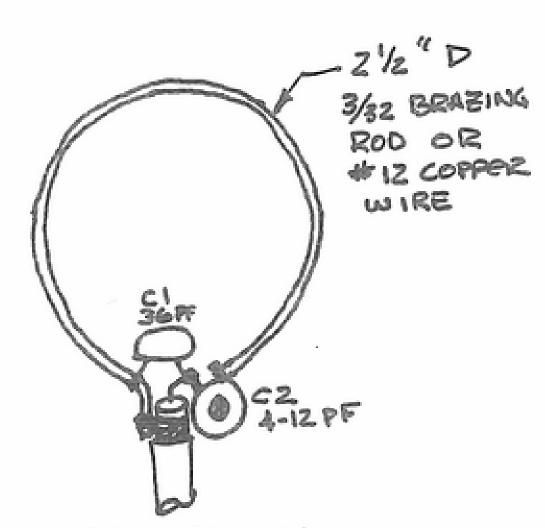
JOE, K5JB

ANOTHER DF LOOP

THIS MAY BE A BIT PREMATURE BUT I MADE A MINIATURE VERSION OF THE W5KOZ DF LOOP AND HAD A HALF A PAGE LEFT SO I THOUGHT I WOULD PASS IT ALONG THOUGH IT IS NOT COMPLETELY REFINED. I WANT TO INCORPORATE SHIELDING TO MAKE IT A TRUE H-FIELD ANTENNA BUT IT WORKS PRETTY WELL AS IT IS. IT HAS SHARP NULLS BUT EVERY SAMPLE MAY HAVE ITS OWN PECULIAR PATTERN UNTIL I GET THE PARAMETERS WORKED OUT FOR THE SHIELDING. FOR THOSE WHO DO NOT HAVE A COPY OF THE SEPTEMBER 1976 C & E, OR THE LATER ONES WHICH DESCRIBE THE W5KOZ LOOP, I WILL RE-DRAW IT WHEN I GET THE MINIATURE LOOP WORKED OUT. IT IS MADE FROM A LENGTH OF 3/32 BRAZING ROD WITH THE ENDS CURVED AROUND TO ALMOST MEET AND FED WITH A GAMMA MATCH.

A TRUE LOOP IS ACTUALLY SUPPOSED TO BE A SMALL FRACTION OF A WAVE-LENGTH IN SIZE. I TOOK A SCRAP OF BRAZING ROD AND BENT IT INTO A CIRCLE. IT TURNED OUT TO BE 2 1/2 INCHES IN DIAMETER. THE INDUCTANCE WAS CALCULATED TO BE .167 UH. TO RESONATE THIS ON TWO METERS, IT WAS TO TAKE ABOUT 7 PF. IN ORDER TO GET A CONNECTION TO A PIECE OF COAX WITHOUT KILLING THE Q OF THE LOOP, I ASSUMED A Q OF 10 AND CALCULATED A CAPACITIVE MATCH. THE RESULT IS IN THE FIGURE. WHEN I TRIED SHIELDING THE THING, I HAD TROUBLE GETTING A BALANCE OF THE ELECTRIC FIELDS INVOLVED. MORE ON THAT NEXT MONTH. TRY IT THIS FAR AND SEE WHAT YOU THINK. RESONANCE IS ASSURED IF PEAK SIGNAL IS RECEIVED WITH ADJUSTMENT OF THE CAPACITOR, IF IT IS NOT ON AN EXTREME END OF ITS RANGE.

JOE, K5JB



EXPERIMENTAL DF LOOP

NOTES:

C1 IS A 36 PF SILVER MICA.
30 TO 40 PF SHOULD WORK OK
AND CERAMIC IS OK BUT SHOULD
BE NPO.
C2 IS A CERAMIC 4-12 PF.
ANY AIR VARIABLE, COMPRESSION TRIMMER, OR PISTON
TRIMMER SHOULD WORK BUT IT
SHOULD BE PHYSICALLY SMALL.
A WOODEN DOWEL COULD BE
ATTACHED TO SERVE AS A
HANDLE.

AMATEUR RADIO EMERGENCY SERVICE



Bill Skipper, KB5BS, 449 N. Air Depot #20, Midwest City, OK 73110

AMATEUR RADIO EMERGENCY SERVICE

Meeting started at 7:05 p.m. at the Red Cross. I announced that the new Assistant EC's are: Bryan DeHart, N5BEV, in charge of the County Civil Defense; and, Fred Taylor, KA5CXW, in charge of the new Explorer post.

The Oklahoma County Emergency Training net will have new net controlls each Assistant EC taking the net one Monday out of each month. If there is a 5th Monday, a full member of ARES with 2 meters will take the net. These people will be picked alphabetically by their call's suffix and will be considered part of their training.

Every net will now have a Ham Radio (HR) report given.

Reports were given by all attending. Assistant EC Don, AE5N, said the SKYWARN training is going very well with people from as far away as Ponca City attending. One person from Kansas signed up but was unable to attend due to ice and snow conditions. The National Weather Service is looking for donations of a synthesized 2 meter rig and a 10 amp power supply.

Bob, W5HXL, reported for Charlie, WA5JGU, that the Red Cross did receive a pair of headsets. Fred, KA5CXW, gave a report on the Explorer's first nighter on February 27 with 6 following meetings, every other week. Each meeting will have training in different emergency fields such as Red Cross, Civil Defense and National Weather Service. Explorers are still looking for volunteers--Contact Fred.

Bryan, N5BEV, gave a full report on the Civil Defense and is looking for volunteers to operate in the CD van. He needs operators mainly in the cities surrounding Oklahoma City, such as Midwest City and Bethany.

Howard Wise, WD5IDB, reported that the Edmond Amateur Radio Society has coordinated with the Edmond Public Service Officials and is setting up an EOC. They will be working with the Oklahoma County ARES.

CPR training is in the near future for all ARES members. If you're interested, contact Charlie Green, WA5JGU, or Bob Ashby, W5HXL.

Frequency changes to the ARES Readiness Plan which was printed in the January issue of C&E are: 7.285 MHz, not 7.825 MHz; and, add cw frequencies of 3.705 MHz and 3.682 MHZ.

Bill, KB5BS

ESTIMATING
WIND SPEED
IN SEVERE STORMS



Each spring the Great Plains are raked by violent thunderstorms producing high winds, large hail, heavy rain, and sometimes tornadoes. Thunderstorms are very powerful local weather systems usually five to fifteen miles in diameter. The characteristics of these storms vary from storm to storm, but once they become severe they behave in a similar fashion.

The greatest threat from these storms is the damage that occurs when a tornado is produced. However, considerable damage occurs each year from the other elements which cause these storms to be classified severe. Large hail (3/4 of an inch or larger) destroys thousands of acres of farmland as well as damaging cars and windows in metropolitan areas. One of the most common characteristics of severe storms are high winds (50 miles per hour or greater) which can produce widespread damage.

The winds in severe thunderstorms are often underrated in terms of their ability to produce damage. For instance, winds of 40 to 50 mph can cause tree limbs to fall or knock fences down. Higher winds (severe storm category) can cause structural damage to some buildings. Often winds of 50 to 60 mph will cause roof damage to older buildings and uproot tall trees. If there is any twisting to the wind, it can appear to the untrained eye as though a tornado moved through the area.

Once a thunderstorm has become severe with winds over 50 mph, it may remain so for up to several hours. Thus, wind observations become important in identifying areas in the path of the storm that may experience damaging winds and in issuing effective warnings. Usually the observations are combined with nearby anemometer readings and radar information to produce an overall view of how the storm is behaving.

With the formation of spotter groups, wind observations are often wind estimates and not direct measurements as with an anemometer. This can result in considerable error in the wind observation. The observations are greatly influenced by one's personal impression of the storm and can be as much as 20 to 30 mph too high. Errors this high are usually caused by the excitement generated by the storm.

However, even among those not too excited by severe storms, errors in wind estimates may be caused by the relative strength of the winds. For example, during the spring season surface winds are often 20 to 30 mph or higher. These strong winds are caused by large storm systems which form farther south in the U.S. in early spring and are responsible for producing severe thunderstorms. When a severe thunderstorm moves through with winds up to 70 mph the increase in wind speed is only about 40 or 50 mph. Even though the winds are high, this increase in wind speed is not that great. Errors may not be large, since the spotter is already accustomed to fairly brisk winds. Therefore, the wind estimates made by him will probably be close to the actual wind speed.

In contrast, by late spring or early summer the large storm systems which move across the country are farther to the north. Thus, the surface winds may be as low as 5 to 15 mph. A thunderstorm with 70 mph winds will appear stronger because the spotter did not experience stronger winds before the storm. Therefore, the wind estimate may be reported too high because of the relative wind strength and the excitement generated by such a storm. It is this situation that creates the greatest error in wind estimates.

There are cases where the wind estimates are too low. Usually these errors are with wind speeds greater than 100 mph. At these velocities many people cannot distinguish variations in wind speed unless they are large (about 15 mph or greater). Fortunately, winds over 100 mph are rare even for severe thunderstorms.

Thus, most of the errors in wind speeds will be errors that are too high. Estimating winds in flat terrain can be very difficult. But, with a few trees or other objects in the vicinity it can be done with reasonable success. Table 1 is a good guide to use and consistently produces the best estimates. The table is quite good up to about 55 mph. Above about 70 mph only crude estimates of the wind can be made.

It is important to remember that winds do not have to be extreme to cause widespread damage. It is surprising the amount of damage that can be produced by winds
of 45 to 55 or 60 mph. Wind estimates and observations are very important in severe thunderstorms and should be done with considerable care. The better they can
be observed and reported the better the warnings will be when issued.

(CONTINUED NEXT PAGE)

TABLE 1

This table was designed by Admiral Beaufort in 1805. He had grown tired of hearing about the exaggerated wind speeds reported by people. Because of its simplicity, it has been used internationally ever since.

WIND SPEED (mph)	SPECIFICATIONS FOR USE ON LAND
1 - 3	Direction of the wind is shown by smoke drift, but not by wind vanes.
4 - 7	Wind is felt on face; leaves rustle; ordinary wind vanes move.
8 - 12	Leaves and small twigs in constant motion; wind will extend light flags. (Normal summer wind)
13 - 18	Raises dust and loose paper; small branches move.
19 - 24	Small trees in leaf begin to sway; crested wave- lets (also known as white caps) form on inland lakes. (This is the normal wind in early spring for Oklahoma in advance of large storm systems).
25 - 31	Large branches in motion; whistling heard in telephone wires.
32 - 38	Whole trees in motion; inconvenience felt in walking against the wind.
39 - 46	Twigs and small branches break off of trees; walking difficult. (Normal thunderstorm winds).
47 54	(Severe thunderstorm) Slight structural damage occurs (such as shingles blown off roofs and ob- jects not tied down are picked up into the air).
55 - 63	Trees can be uprooted; considerable structural damage to property (many wooden fences can be blown down; windows may be broken by flying debrised angerous if one is caught in open country).
64 - 75	Widespread damage occurs (to buildings as well as vegetation; crops can be destroyed as they are flattened).
75 & UP	Extremely rare! (Only very crude estimates can be made; roofs may be destroyed; cars overturned).

ABOUT THE AUTHOR: Jim Gandy received his Bachelor of Science Degree in Meteorology from Florida State University, with additional training at the Institute of Storm Research in Houston. His work experience includes two years at WREG-TV in Memphis, and he is currently in his third year as staff meteorologist at KTVY-TV, Oklahoma City. Gandy is also president of the Central Oklahoma Chapter of the American Meteorological Society.

March 1980



MEETS: 7:30 PM 3rd Tuesday each month Okla. Military Academy, 36th & Grand. PRES: Doc Goodhead WA5CZN 721-8592 V-P: Chuck Wilhite K5NK 721-4926 SEC/TR: Karen Recer WD5HBX 751-5378

ANNUAL WEATHER MEETING

A very nice crowd showed up for the annual weather meeting at KWTV, Channel 9, on February 19. Gary England had several new slides to show us that were very impressive, as well as the NOAA film on spotting. Gary also told us a little about the new doplar radar system being installed. The current radar being used shows the reflection of precipitation in the air, while the new system will show the wind speed away from and toward the radar. Both systems will be utilized, increasing the warning time for severe weather and the accuracy of the warnings.

A new county map overlay system will allow the amateurs located in the radar room to give periodic update information to those of us in the field. If you don't hear what you want to know, be sure to now direct your ire to the radar controls: WB5MLN, Hobe; WB5ZOI, Lloyd; WB5YLZ, Sully; WA5BQX, Bob; and WB5QPI, Zack.

Net controls this year are: N5IH, Henry; K2GKK, Mac; WB5QPI, Zack (double-dipping, Zack?); and AD1S, George. When participating in the weather nets, please follow these guidelines:

1. When your area is called, check in by suffix only.

2. When you are recognized, give your complete call, grid coordinates, and advise the net control if you can go mobile. If, by chance, you don't have your grid map with you, give the nearest major intersection and/or reference point (ie, Crossroads Mall, Will Rogers Airport, etc.).

Keep reports short and to the point.

4. Pay attention!! Listen to what is happening. If your neighbor has all ready given a report, don't swanp the net by making duplicate reports unless he left out vital information. If net control has asked for nothing less than condition 2 reports, don't call in and say, "It's raining cats and dogs out here!". Listen to see if an update has been given for your area before requesting one.

The grid maps had not been received from the printer at the time of the meeting. When they are received, Chuck, N5SW, has agreed to place them in his store, Kryders Electronics, at N.W. 50th and MacArthur (MacArthur Park Shopping Center) for distribution (tnx Chuck). I'll hopefully have some at the next meeting also. The maps haven't changed, so if you already have one, it's still good, and you can help hold the costs down by not taking more than you really need.

I hope all of you that attended the meeting enjoyed it and that those of you who didn't attend will try to make it next year. I've been three years in a row now and see new things each time I see the film and slides. Our thanks to KWTV and their staff for sponsoring the meeting. Here's hoping for a nice calm spring.

TWO METER HOMEBREW ANTENNA CONTEST

Don't forget that the March 18 meeting of OCAPA is the great "Two Meter Homebrew Antenna Contest". Any homebrewed two meter antenna (no matter how crazy) can be entered and will be tested (under less than ideal conditions). El Supremo has personally assured me that there will be a winner and a prize (prizes?). So come on out, it ought to be interesting to see what some of our local crazies come up with!!

UHF REPEATER CHANGE

Due to intermod, it has been necessary to incorporate sub-audible tone squelch on the repeater. The tone frequency is 141.3 hertz. For further information, contact Mark, WA5REC, at 348-7847, or Montie, WA5TSL, at 685-1839.





THANKS

By now you have probably all noticed the resumption of the better repeater operation. The desensing problem has now been found. It was a repeater located on the KTVY, Channel 4, tower which was emitting the white noise which was causing all of the trouble. The repeater has been turned off until repairs to it can be made. Not wanting to leave anyone out, I won't list the names, but big thanks to all who helped solve the problem.

WD5HBX

ROSTER

I have had a couple of members contact me regarding changes to last month's roster. If there are any more corrections, please do let me know. Also, if your call, name address or telephone number changes, please let me know so that we can keep your C&E's coming to you (also, we'll know how to reach you if needed). Thanks. WD5HBX

DEAR MR. WILHITE,

As you may have known or figured out, $\underline{\mathsf{Mr}}$. Wilhite skipped his duty this month in regards to the C&E just for a <u>little fishing trip</u>. Therefore, there is no $\underline{\mathsf{I}}$ Heard this month (aww!!) and I hope you will allow me a little deviation from the normal reporting format to place the following purely personal note and reflection:

Dear Mr. Wilhite,

I hope you get yours for sticking me with this job!!!

Sincerely, Karen, WD5HBX.

MARCH

Don't forget:

March 17--St. Patrick's Day.

March 18--OCAPA meeting (see you all there).

March 20--1st day of Spring.

March 30--Palm Sunday.

Karen, WD5HBX

AMATEUR RADIO AWARDS

There's a goodly number of radio amateurs who get their kicks out of chasing awards. And there are awards for just about everything that can be dreamed up!

The Radio Society of Great Britain has published an eight-page book on just about every award known to mankind in the year 1980! Full details are given, along with maps of the respective countries. These maps are valuable in that they show subdivisions and the call signs for such internal divisions.

An appendix has a very detailed break-out of prefix (and suffix) identifications of all countries and their subdivisions.

The book will be available from the Ham Radio publishing group. It costs a wee bit under three pounds in England, but what Ham Radio will ask is unknown. Whatever it is, it'll be a good buy for the award chaser.

W5JJ

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WEALTH OF INFORMATION DEPARTMENT

I used to subscribe to the Government Printing Office Publications for the Amateur Regulations from the Federal Charlie. I was a good boy and renewed my subscription every year so that I could remain an "informed" amateur. For some reason, the GPO lost me in the shuffle with some claptrap about how they were reorganizing the whole shebang and I could subscribe to the regulations in various parts. Huh!? Was this an improvement? Well, to be quite honest, I wasn't sure. Certainly seems that it was to the GPO's advantage to divide and multiply (multiply the amount of money they received for any particular Subpart by the number of different subparts) as opposed to offering three subparts for one price. Well, I was certainly lost in the shuffle and never got around to resubscribing after their 'adjustment' period. It didn't seem to be so important until I lost an argument on the regulations the other day. Humm. Time to refresh the old memory. I dug through my collection of marginally useful information and found the current prices and availability of various rule publications which I reproduce as follows:

Part 97, Amateur Radio Service, \$1.40, stock number 004-000-00357-8

Part 95-Subpart A, General Mobile Service Rules and Regulations, \$1.00, Stock Number 004-000-00340-3

Part 95-Subpart C, Radio Control Radio Service Rules and Regulations. 80 Cents (but there's a minimum charge of \$1.00 for each mail order), Stock Number 004-000-00341-1

Part 95-Subpart D. Citizens Band Radio Service Rules and Regulations, \$1.25, Stock Number 004-000-00356-0

Part 95-Subpart E, Technical Regulations, Personal Radio Services, 80 Cents, Stock Number 004-000-00343-8

These are all available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Drop a line to say you want to read up on all the regulations, bureaucracy-wise.

While your at it, you may want to have access to all the various telephone numbers within the FCC while bureaucrat baiting. How o find out who goes where? Simple, get a copy of the official Fall 1979 FCC Telephone Directory which is available from the Downtown Copy Center, 1114-21st Street, Northwest, Washington, D.C. 20037. The cost of each book is \$1.54 which covers the cost of the directory, tax, and postage.

Micheal Salem N5MS

WATERFALL IN THE SKY

A note from C & E correspondent Vince Lissenfeld included a news release from the Department of the Interior detailing a \$2.2 million contract awarded to COMSAT General Corporation by the US Geological Survey to set up a pilot program for a communications satellite-supported water information system. The idea is to test the feasibility of establishing a full-scale system for collecting hydrologic data such as stream stages and water quality from water monitoring stations and transmitting the data to receiving stations by commercial stations. At each of 75 sites, the hydrogic data will be transmitted by solar-power-celled battery operated radios to a commercial communications satellite in geostationary orbit. The material will be relayed to a earth receiving station and transmitted by telephone lines to a processing facility operated by the Environmental Research and Technology company at Concord, Massachusetts. Very clever, March 1980

CORA Collector & Emitter -26these americans. I can only hope that they never hook up to the water fountain at my office. A lot of us could be in a lot of trouble. I always distrusted a public drinking fountain where you had to cut the water with a knife. But actually, the message here is the multitude of uses we will see with the growth of satellite transponders located 22,300 miles above the earth in geostationary orbit. Bob Cooper W5KHT has more fully documented some of the frontiers that we face with a variety of articles that have appeared in 73 Magazine, QST, (Satellites indeed make strange bedfellows), Radio Electronics and a host of others. The future is indeed up in the skies. Previous articles in the C & E have indicated that most of the satellites, indeed the RCA Satcom I and II are generally thought to be video relay stations only. Actually, there are a variety of subcarriers that can be spaced throughout the 3.7 to 4.2 Ghz downlink from the satellite as "appendages" to the 24 television transponders. And each of these will be able to carry a variety of audio and data channels for any number of uses. I understand that UnitedPress International and the National Public Radio Network are only two of the groups sending audio only to the satellites. Get ready for a revolution in ready to use radio. Minature radios in the Gigahertz range will eventually work through satellites to produce worldwide interference and fade free point to point communications.

By the way, a funny thing happened to RCA on the way to the geostationary orbit. They lost the RCA Satcom III Satellite. Actually, that's not too difficult to do considering that outer space is pretty big and the satellite is fairly tiny. Satcomm III vanished from radar December 10, some four days after its launch. Meanwhile, RCA had to go hat in hand to Western Union, Telestat and A T & T Comstar. Only Comstar agreed to provide 11 Comstar transponder channels for certain specified periods to take up the slack. RCA is studying the idea to see if they can make do while waiting for the launch of Satcom IV.

Meanwhile, back at the ranch, Comsat (the Communications Satellite Corp.) has announced a joint venture with Sears (remember, they have everything) to market small, receive-only, earth station terminals that would permit direct satellite-to-home television broadcasting. This is a slight change from a previous Comsat announcement in which they intended to lease receiving antennas to customers for a fee that would include the cost of two to six channels of programming. Comsat now intends to sell small dishes through Sears, which would also handle the servicing. Comsat is also in the process of filing an application with the FCC for approval to operate high powered satellites to go with these receivers. Actually, the technology is here. In Japan, a high-powered system now being tested uses Sony receivers that cost about \$300. This is certainly more cost effective that the original \$20-\$30,000 ground terminals. It is my understanding from conversations with a friend of mine who attended the Satellite Private Terminal Seminar with me last August in Oklahoma City that a complete receiver can be constructed for a total parts cost of \$500. Antenna designs and new low cost components are responsible. Turnkey installations are still available for a little trouble and \$4,000 (utilizing the International Crystal receiver), but for the experienced builder and scrounger, W5KHT has detailed plans in a recent Radio Electronics that brings the cost to a conservative \$1,000. The Japanese broadcasting experiments utilize a simple dish antenna that measures roughly two feet across, not much more complicated that the MDS receivers that populate to OKC environs in advance of Cable TV. No doubt that the networks, broadcasters, and cable industries will have a few responses to Comsat's proposals. After all, how would you like to be CBS, NBC, or ABC sitting on top of a multimillion (make that billion) investment throughout the country with each of their affiliates only to be outgunned by a 200 watt satellite transponder. Or what about the growth of the cable industry with the considerable expense they have in wired cities, thinking about 24 channels of programming available for a simple \$300.00 investment. Frightening. And it could be fun. Anybody want to go out to launch?

Micheal Salem N5MS

March 1980

Just think. Ten years ago I couldn't even spell synthezizer (oops, synthesizer) and now I have a couple. And I certainly am not alone. More and more of these goodies are available to make thousands of amateurs and scanner owners "Unsafe at any frequency. " I'll never forget one of the first schematic diagrams I saw for a two meter synthesizer years ago. Goodness, who thought up this madness? I had the opportunity to reflect on these early experiences a couple of days ago as I was wandering through the synthesizer of an aircraft radio that had suddenly died midfligt. It took awhile to get the schematic for the synthesizer (my source shall remain nameless, but I certainly appreciate the trouble he went to in digging them out), but I was not to be deterred, especially when I found out that we could replace the failing synthesizer for a mere \$150 for the exchange (ahem, somebody is making a bundle there). Now I don't disparage our friend in the radio shop business, but there was a lesson to be learned here. I am sure that anyone who hooked a synthesizer or aircraft radio to 150 volts accidentally may get his money's worth when he sends it in for exchange with a working unit for just \$150. That was not our case. My radio died a rather simple death during a flight and absolutely refused to operate. The symptoms pointed to a dead synthesizer. A quick check with the scope showed that most of the tuning voltages seemed to be OK. I followed the circuit from the reference oscillator to the phase comparator to the VCO. Aha, we got a voltage out of the phase detector, but the VCO was dead (The voltage from the phase detector was actually a tuning voltage that came from a resistor network on the frequency switches). Alan and I fired up a soldering iron and removed the VCO board from the radio. We checked the transistor (a 2N5179) from the VCO and tested it. Humm, it seems OK. This transistor has a gain of about 25 and is good to about 1 gigahertz. We just didn't have any spares lying around. I checked the schematic and found that this particular transistor was duplicated about 20 times over in various circuits in the synthesizer. Well. to eliminate the other circuitry, I pulled a 2N5179 out of the output buffer and installed it in the VCO. Voila, a miracle as the VCO took off like a banshee! Well, we are still one transistor short. The first transistor still appeared to be good. What the heck, lets stick it in the buffer slot. It worked. The transistor had aged and dropped in gain. It had enough gain to function perfectly as a buffer, but not enough gain to operate as an oscillator. The radio worked perfectly. Not bad for a zero parts count fix.

I suspect that the problem lies with the circa 1973 design of the radio. The synthesizer is chock full o' parts including all kinds of chips and transistors. Synthesizers just aren't that comprehensive any more. As a case in point, I direct your attention to a couple of three chip synthesizer sets just out from Plessey Semiconductors and (you guessed it) Motorola Semiconductor Products. Actually, they were not the first. I remember a data sheet I saw in 1975 from Nitron which advertised a three chip 16 channel scanner set with nonvolatile memory which eventually (I understand) found its way into the Bearcat 101 synthesizer scanner. I thought this was pretty fantastic and eventually owned one of the 101's to play with. However, this was not enough and eventually, the 101 went on the block for sale and a BC 250 took its place. It also is a remarkable device. My next experience with synthesizers was the Motorola HT-220 synthesizer designed and built by Dale Heatherington. It fitted a complete 146 to 148 Mhz 5 Khz step synthesizer in the back of a PL length HT-220. I now have one for future experimentation courtesy of WB5DUC. It still is a remarkable device. But the recent deluge of synthesized walkie talkies from Tempo. Yaseu, and Kenwood is indeed mindboggling. Some of the bells and whistles on these goodies are incredible. I have not had the opportunity to spend considerable time with one of these radios and have only been able to drool at the various models I examined purchased by my alway feast, never famine friends. Really nifty. Sigh, maybe someday. It is impossible to keep up with the state of the art in amateur radio, dollarwise.

In any case, synthesizers will get simpler. The Plessey Semiconductor chip set can synthesize all channel spacings needed for radio communications. It is apparently designed for mobile radios, scanning receivers and microprocessor controlled synthesizers. The NJ8811 is the synthesizer-controller/divider. The other two chips (SP8901 or SP 8906) may be used interchangeably depending on the frequency range and channel spacing desired. The SP8901 is a four modulus divider (divide by 512, 510, 480, and 478). The SP8906 is also a four modulus divider, but uses different divide ratios (divide by 256, 255, 240, and 239). You construct a tuner/synthesizer by selecting one of the dividers and mating it to the NJ8811 and its crystal oscillator (up to 4.8 Mhz) and provide channel spacings of 40, 50, and 60 Khz., as well as submultiples down to 5, 6.5, and 7.5 khz.

The 8901 can accept inputs up to 1 Ghz and the 8906 is limited to 500 Mhz. Both can be programmed to divide by any one of their four ratios. The NJ8811 contains all the decoding and control for interface directly to ROM's, PROM's and microprocessors. Both the SP8901 and 8906 are housed in 14 pin DIPs and operate from a single 5 volt supply. The 8901 draws 500 mW and the 8906 used 400 Mw. Not exactly the best power drain for use in HT's, but suitable for scanners and mobile radios. The NJ8811 comes in an 18 pin DIP and draws just 60 Mw. When the SP8906 is used with the NJ8811, the combination can divide an input frequency by all integers between 3480 and 69, 375. Grounding a control pin on the NJ8811 can offset the range to span all integers from 36,608 to 102,143. Hundred unit quantity prices are \$10.35 for the NJ8811, \$38.40 for the SP8901, and \$19.20 for the SP8906. Just a little expensive.

The Motorola chip set is a group of LSI one-chip synthesizers with a typical frequency range of over 25 Mhz. The frequency coverage can be expanded to over 500 Mhz with the addition of existing high-frequency dual-modulus prescaling IC's. The first of these chips feature serial input bit streams, but five additional devices to be introduced later will offer parallel and 4-bit data-bus programming. The other features of the chip family include a crystal reference oscillator, a reference divider, a digital phase detector, lock detection circuitry, and programmable divide-by-N counters. The first of the chips, the MC145155 allows selection of any one of eight reference divider values from 16 to 8192. Combined with a loop filter and a VCO, the circuit provides all the remaining functions of a PLL synthesizer. The MC145155 costs \$4.95 in hundred quantities. The MC145156, which contains on-chip control logic to provide a modulus-control signal for use with external dual-modulus prescaling ICs will cost \$5.43.

Synthesizers will be within everyones reach very soon. And remember that Plessey and Motorola are not building these goodies because they anticipate a vigorous ham market. To the contrary, their logical customers will include a wide range of RF Commercial communications equipment, avionics, land-mobile, marine and other consumer uses, as well as the amateur radio operator. The Plessey and Motorola Chip sets are both in stock.

I haven't had the opportunity to look peek a boo style into some of these new handie talkies, but I would suspect that one or two of them actually contain a small microprocessor that controls the synthesizer. Either that or a small simple controller with ROM. I imagine that the synthesizer chips made by Plessey and Motorola draw too much current for this use. More than likely, the Walkie Talkie makers are hetrodyning down to low frequencies so that they can use current saving CMOS rather than synthesizing directly at the output frequency. The Yaseu (Yahoo?) appears to be a bit wasteful of current, what with the power gobbling LED display, the Kenwood has a permanent display with the LCD. Still doesn't look bad.

Micheal Salem N5MS

CALCULATOR CUTUPS

I found some of these in a Publication issued by North American Phillips and added a few embellishments. Perform the calculations mentioned and then turn the calculator upside down. If using a calculator that rounds off or truncates the display(such as those goodies made by Hewlett Packard) be sure to format properly so that you don't lose any characters.

When WA5NSV walked through the door, late as usual, he was hungry for dinner. His wife tabulated the 2693 seconds he was late, times the 13 times he'd promised before and failed-then added 1 for forgiveness but subtracted . 486 for getting even. Computing these on her calculator, she showed him what was cooked for dinner.

The fellow who kerchunks the repeater repeatedly without identifying should be exiled with Napoleon to the following location:

What is the name of the author of Siddhartha and the last name of the person who plays Johny Fever on WKRP in Cincinnati?

What singing group sang 'How Can I Make It without You. ?"

$$((3 \times 3) \div 100) \times 3 - .001) \times 3 =$$

What did K5JB hide behind his hand when he saw WB5ISN splashed by a passing CBer?

Everyone thought that the Oil crisis was caused by OPEC, but part of the real problem is given by the intermediate solution and final solution of the following two equations:

and
$$(203 \times 7 + .8279) \div 2$$
 — (First Culprit) = ? Second Culprit.

K2GKK spent some time in one of these while in Greenland, K5JL could build one, and WB5ISN wants one to store his Coors in.

$$(.6 \times .2 - .007) \times .7 =$$
 ?

Describe Dolly Parton, Lonnie Anderson, and unidentified repeater kerchunkers. (also applicable to a host of other types who remain nameless or unidentifiable).

$$((202 \times 41) + 5) \times 7 - .082 = ?$$

Don't forget to turn the calculator upside down or stand on your head whichever is easier. Any suggestions? Keep those cards and letters coming in, folks.

Micheal Salem N5MS



THE UNIVERSITY OF OKLAHOMA

CLUB EDITOR Nathan Kirby, KB5BF

Alpha Sigma Delta Radio Fraternity

MEETS: 2nd Tuesday; 8 PM, (Sep-May)
Room 449, Carson Engineering Center
PRES James Gardner KA5DHF 321-8779
V-P Alan Wormser WB5QLF 325-2194
SEC/TRES Peter Richeson KA5COI 325-3015
DUES Nathan Kirby KB5BF 364-7979

EDITORIAL

Club Editors do their best to meet Joe Harding's "Edit C&E" paste up dates, but sometimes we miss. We club editors would not even consider even asking Joe to hold up publication even one night because "the show must go on". To all my faithful readers, I can only offer this excuse. I recently acquired a vintage IBM electric typewriter. Like Mike Salem, I am a person who writes best under pressure. To Mike and myself, the "right "kind of pressure is pounding away at the old typewriter late into the night - the night before the deadline. The disadvantage to this method is if your "e" letter decides to wrap itself around the "t" or other mechanical disaster strikes your typewriter such as a lightning strike due to improper grounding, then your Editor is up that well known creek. My downfall was the IBM typed but would not space the lines correctly. After much frustration I finally gave up and went to bed.

A few days later I took the IBM to Jim Greenshields, WD5HPU. Jim is one of our newest OU club supporters and is associated with - what else - GreenshieldsTypewriters of Norman. Jim also does printing at the business. Jim noted (with sympathy) my plight but when he turned the machine on he said (with a practiced uh-oh! certainly befitting a surgeon who just decided to amputate your best CW fist) that he would need to keep it awhile. Jim noted the clutch was not disengaging which accounted for the noise. He also noted the bastard platen which could be causing some paper problems. At any rate, my newly acquired IBM Selectric is in good hands. I now find it a pleasant experience to just drop by Greenshields Typewriter Repair just to soak up the atmosphere of the place. The old work benches with the myriad fine screwdrivers and special tools are mindful of an old world craftsmen's shop. The low stucco ceilings lend an additional traditional air to the shop that fairly oozes the fact that these guys have been repairing typewriters a long long time. At any rate, I hope to have the patient out of "Dr. Jim's" hospital in time for the next issue of the Collector and Emitter.

A FAMILIAR VOICE RETURNS BRIEFLY

A familiar voice was heard on the W50U 147.06/66 repeater over Christmas. Roger Stephens K5VRX/4 was in town a few days visiting. Roger has been working for the Occupational Safety and Health Administration (OSHA) in the Washington D.C. area. Roger is an Industrial Engineer, but has been working in Human Factors Engineering - some with lots of field work. He has also been on the lecture circuit in behalf of safety. Home QTH for K5VRX is Falls Creek, Virginia which is about 10 miles west of D.C.

At the home QTH, Roger has his TH6 Tribander back in operation. He is feeding it with his Heath SB-104A and a Henry 2KW amplifier. Roger has been keeping a sked with Bob Fields, N5ALG, one of our local hams. Roger related that he has been spending a lot of time at K4CG which is the Coast Guard club station in Alexandria, Virginia. He has also been associated with the National Capital DX Association in the D.C. area. The NCDXA has a nifty way of passing DX information on 147.420 simplex. Roger was in the December issue of QST magazine. Roger is a member of the ARRL Advisory Committee on Biological Radiation (rf) Hazards which is planning a response to an FCC Notice of Inquiry about the possible biological effects of rf radiation. It appears that Roger has been keeping busy since he received his PhD.



Alpha Sigma Delta Radio Fraternity since June 10, 1924

Dedicated to serving The University, the community and introducing amateur radio to tomorrow's leaders.

MARINE COMMUNICATIONS

A Series by Nathan A. Kirby, KB5BF

In the last two months we have learned some about the 2-4 MHz and the VHF-FM marine bands. We have learned that marine communications has three functions which are safety, operational, and business. We found familiar procedures when we lightly touched on licensing, and we learned that QSO's have a time limitation of 3 minutes in duration after the two stations have established contact. We also learned they must wait 10 minutes before contacting each other again in order to keep the air clear for the primary function - safety. In short, while rag chewing is the modus operandi in ham radio, the primary function of marine communications is safety and rag chewing is discouraged. Exchange of personal communication is prohibited on the distress frequencies of 2.182 MHz and 156.8 MHz. Information of a personal nature is included in the business function which is the lowest priority of marine communication. We have also learned the difference between a distress, calling, and working frequencies and that the calling frequency is the distress frequency in order to encourage all stations to maintain the required listening watch on 2.182 MHz or 156.8 MHz (Channel 16).

SECRECY OF COMMUNICATIONS

Section 605 of the Communications Act of 1934, as amended, prohibits the divulgence of interstate or foreign communications transmitted, received, or intercepted by wire or radio to anyone other than the addressee or his agent or attorney, or to persons necessarily involved in the handling of the communications, unless the sender authorizes the divulgence of the contents thereof. Persons intercepting such communications or becoming acquainted therewith are also prohibited from divulging the contents or using the contents for the benefit of themselves or others.

There are some exceptions to the above. The requirement for secrecy does not apply to ships in distress. It does not apply to information broadcast to the general public nor to communications by Amateur Radio Operators. In short, the secrecy provisions cover messages addressed to a specific ship or coast station or to a person via such a station.

SHIP RADIO TELEPHONE STATION DOCUMENTS

While most commercial vessels are required to have radiotelephone stations, private vessels are not required to have a ship radiotelephone. If a vessel is voluntarily equipped with a ship radiotelephone, the following must be provided:

- 1. A valid station license (i.e. current).
- The necessary operator's license (i.e. third class or restricted operator's permit).
- The Radio Station Log.
- 4. Part 83 of the FCC rules (may be kept ashore).

RADIOTELEPHONE STATION LOG

Because of the unique nature of ship communications, a station log must be kept. The following are some requirements for the log. Before we do this let me clear up some confusing nautical terminology that I am sure you have been losing sleep over. What is the difference between a boat, vessel, ship, and yacht? The terms are impre-



cise. Basically a boat is a water borne vehicle smaller than a ship. One definition of a boat is a small craft carried on board a ship. The term small craft is used interchangeably with boat. Many boatmen (a "boater" is type of hat worn by boatmen) consider a boat as any vessel less than 65° in length - this being the maximum length of a vessel before it is subjected to special regulations by the Coast Guard. Vessel is a broad term for water borne vehicles and is used without reference to size. A yacht, more specifically is a vessel used strictly for recreation and pleasure as opposed to work or business. The term yacht is not used for a vessel less than 40 feet in length. The traditional "she" remains fully correct when referring to any vessel except an enemy man-o-war who is referred to as "he". (whew!)

The radiotelephone log:

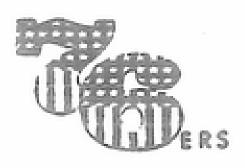
- 1. Must bear the name of the vessel and call sign of the station.
- 2. Each page must be consecutively numbered.
- Be signed by the operator who makes entries as to the time each watch (i.e. listening to 2.182 MHz or 156.8MHz) begins and ends. The operator should record as completely as possible all distress and radiotelephone alarm signals heard whether or not the operator answered the distress. He should record as accurately as possible any communications related to the distress. He should do the same with any "urgency" or "safety" signals.
- 4. The 24 hour system is used in recording time. Local mean time is normally used. Greenwich Mean Time (GMT), which is used exclusively on international voyages, may be used locally.

RETENTION OF RADIO LOGS

Radio logs of ship radio telephone stations (more correctly Maritime Mobile Station) must be retained for at least 1 year after they are filled. Logs must be retained 3 years if they contain entries concerning distress or disaster. They must be retained even longer 1f they concern radio cummunications being investigated by the FCC or communications against which claims or complaints have been filed. If your friendly FCC inspector wants to see them, don't deny him the privilege. He can even remove them from your possesion or request you to mail them to the FCC office. If you mail your Maritime Mobil Log, be sure to send it by registered or certified mail, return receipt requested. This is for your protection in case your log gets lost in the FCC office; you now have a slip of paper to show the burden is on the FCC.

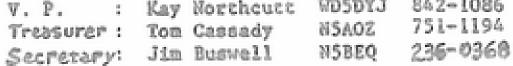
In short the Maritime Mobil Station Log is an important document. You may never know how valuable it may become because you may be able to fill in the missing bit of information in a major vessel disaster. This reinforces what we have said in our last two chapters. Marine Communications is primarily for safety. Its secondary function is operational and then comes business and personal type communications.

73. KB5BF



MEETS: 7:00 PM on the 2nd Tuesday of each mouth at Air National Guard - Will Rogers World Airport

WD5BMP 282-4353 President: Jos Couch V. P. : Kay Northcutt WD5DYJ 842-1086 751-1194 SOACIS Treasurer: Tom Cassady







The February meeting was called to order by Prez Joe, WD5BMP, at 7:03 pm with 47 members and guests present, including many harmonics and (announced with a little urging) 9 licensed YLs.

The minutes of the January meeting were approved as

published in the February issue of Collector and Emitter.

The Treasurer's report by proxy Bill, KB5BS, was

accepted as read.

There being no old business brought to the club's

attention, the chair opened the floor for announcements:

Bill, KB5BS, Oklahoma County Emergency Coordinator (EC) (with papers, now), announced his intentions and attempts to coordinate the resources of our local Amateur Radio Emergency Service (ARES) with the local media (radio, newspapers, TVs, etc.) and Disaster Services (Red Cross, Civil Defense, Fire, Police Departments, etc.). Additionally, ARES members wall be assisting with communications for "Walkathons," parades, "The Special Olympics," a motorcycle motocross, among other events, as we're asked. If you're interested in assisting the motocross, contact Pat, N5PS. If you're interested in assisting a new Explorer Scout Troop, contact Fred, KA5CXW. If you're interested in assisting the Special Olympics, contact Hobe, WB5MLN, or Jim, N5BEQ. CORA received a request from and accepted another new

supporting member club, from the Woodward area, the Great Plains

Amateur Radio Club.

It was moved, seconded and passed that CORA hold a

raffle in conjunction with Ham Holiday 1980 as CORA saw fit.

It was moved, seconded and passed that the Bicentennial Amateur Radio Club (76ers) would support Ham Holiday 1980 in accord with the CORA Constitution.

The balance of the announcements consisted of the Bill, KB5BS, relayed much concern about the possibility following: of a satellite receiver for the 16/76 repeater and he would look into it further; also, he needs a minimum order of 10 to order more T-shirts:

Dick, WB5TMW, is our CORA representative, need two more;

Susie, KA5FED, is Club Editor;

Mac, K2GKK, has a complete Drake C-line for sale. After the 8 o'clock break for coffee/donuts/etc., the program was Fast Scan "ATV" by Doc, WA5CZN, from the Amateur TV Experimental Society (ATVES). Doc showed how, with a little judicial

effort, an amateur can get on UHF (or SHF) ATV for \$146.001 and distributed the paperwork showing who and how. There will even be a repeater for QRP ATV, probably within a couple to three months! The program for next meeting is skeduled to be Bob,

W5KHT, on Satellite TV reception: 7 pm, Air Mational Guard Center, 11

March, y'all come!

The meeting adjourned to the aftermeeting at 9 pm.

Jim, N5BEQ Secretary.

AE5N

DONALD H. DUCK Special Instruments Representative

Beltone Hearing Aid Service 2828 N.W. 50th Oklahoma City, Oklahoma 73112 Telephone (405) 947-4442



MY OPINION

The program this month is one that lots of people have been waiting for. Bob Cooper Jr. W5KHT, will be our guest speaker this month. Bob has a column in QST magazine called THE NEW FRONTIER and is active in geo-stationary satellite reception technology. Bob has written for several magazines and has his own "Coop's Satellite Digest". This will be a super program so make plans to be there. The meeting will start at 7:00 pm.

We heard from Coy Day last meeting that his group will be moving to Tulsa in about a year. This means that we will need a new meeting place. However Coy is trying to get us a new home at another location

on the base.

Well... My idea of a remote receiver for our repeater gained some support but still not enough to go ahead. Perhaps the members that live in the outlying areas should speak up. Our repeater is being used by the ARES net and is the only OPEN repeater that is on emergency power that I know of. Our machine should at least be able to work mobiles over the Metro area. We have more money in the repeater fund than is needed for current expenses and this money should be used to upgrade the equipment in some way.

Several members came down with FIELD DAY FEVER at the last meeting so we will be working on that also. If you have any ideas for FIELD DAY or want to ramrod part of it why wait to be asked, let

me know.

April program will be Micheal Salem N5MS, more about that later.

Joe, WD5BMP

AMATEUR 2 METER "SAMARITANS"

"SAMARITAN": ONE READY AND GENEROUS IN HELPING THOSE IN DISTRESS."
WE WILL MONITOR THE 34-94 REPEATER EACH WEEK DURING THE HOUR
WHERE OUR CALL SIGNS APPEAR BELOW, SO THAT ANY CALL FOR HELP ON
THAT FREQUENCY WILL NOT GO UNNOTICED.

FOR ADDITIONS, DELETIONS, OR CHANGES: CONTACT C.Y. WB5TKG 232-9005

	-	12	1 - 2	2 3	3 4	_ 5	5 6	5 1	7 8	3 9	9 1	0 1	1 12
M	AM							DCM	NXO		WB5 TKG		
No	PM				WAS HTL	BEQ		CXW					
Tu_	AM							DCM	W85 NXO		TKE		
E	PM				WA5 HTL	BEQ		KAS CXW	,				
WE_	AM							525m	W85 WXO		W85 TKG		
D	PM				WAS HTL	NS DEQ		KA5					
TH.	AM							KA5 DCM	WB5 NXO		TKG		
$^{\prime}^{_{\it H}}_{\it U_{_{\it R}}}$	PM				WAS HTL	N5 BEQ		KA5 CXW				BEV	
FR.	AM							KA5 DCM	NXO		TRE		
11	PM				WA5 HTL	BEQ		KA5 CXW					
SA_	AM										W85 NMK		
"T	PM	BEG										BEV	"5 & E
S	AM	SE SE									TKG		
N	PM	BEV					BEQ					#5 BEV	



Tre-men-dus was the word for the meeting 12 February 80. Fifty attended including the Meeker YL'S KA5GEP and N5BEP. How can you beat the combination of Joe Couch and Doc Goodhead at the same podium? Joe stuck his chin out (and his neck) to whip through the business at hand fast..... Just in time for break, coffee, doughnuts, cakes, and chews. Chuck Wilhite displayed his bush on his chin, newly grown-in time for his fishing trip. next week (after weather meeting 19 Feb).

Don't know how many know that Bill Rogers, WA5RAQ makes us organized by providing an INDEX every year for collector &

emitter. Thank loads.

How can I explain that we knew all about ATV fast scan-slow scan after Doc Goodhead, WASCZN completed his speil-great program

Doc, how soon can you return?

"every one needs weather net training." By this time the weather meeting (19 Feb) and the NOAA weather spotter (Skywarn) have been given by arrangement of AE5N Don and Larry Mooney. Thanks guys.

KA5FED

Hello "76ers" and

"Radio Amateurs"

I thought that I would start this first article by introducing myself. Some of you I have already met at other meetings or places, but some I haven't. My name is Susie and my call is KA5FED. I am very proud of my call ---- it has many advantages as you will see, in one way at the close of my letter. (HI!) I live at 3113 Wilshire Terrace, Oklahoma City, Oklahoma. My phone number is (405) 842-8014. I am fairly new at this, but I hope I can be able to serve as your "76ers" editor. With your cooperation and assistance, we can work together and produce many good things for C&E readers and amateurs. There are so many things to do, to see and always going on, so feel free to call me at any time and don't hesitate to let me know ofany news, information etc., so that we can pass it on to others. I am sorry that I was unable to attend the last meeting (February 12) when "Doc" WASCZNhad a fantastic program and demonstration. I have heard many things about it which it must have been very interesting and informative. I would like to say a BIG thanks to Gred, KASCXW who was able to write an article for me, due to my absence of the meeting, which will be published and edited for our section in the

C&E this month.
Thanks again "76ers" for your confidence and your understanding. I really am looking forward to doing my very best.

"73"

Susie (KA5F)ed note....

FOR SALE:

FOR SALE: HW-100, power supply, mic and key. All you need is antenna. Best offer. Dick, W5MGP Phone 732-6029



MEETS: 8:00 pm First Friday each month Flight Standards bldg, FAA Aero Center PRES Bob Pace WA5CJG 376-3569 V-P Bill Oliver K5KDR 329-6333 SEC Bob Graham WB5NSV 677-8685 TPFA Larry Bugg WB5AAY 789-4180

Club Editor, Bob Graham, WB5NSV TREA Larry Bugg WB5AAV 789-4180
Random Words From The President:

Everyone who came out to the Feb. Meeting of ACARC appeared! to have a good time. The program was on Frequency counters, and some of us learned a thing or two. We also elected a new treasurer, and I would like to say welcome aboard to Larry WB5AAY.

Our next meeting will be March the: 7th at 8:00 pm. The program will be presented by the American Red Cross and will cover such things as "Disaster Preparedness". We would like to invite everyone to come out for this meeting, this means you and your wife, and anybody else you would to bring along. The meeting will be heled in the auditorium of the H.Q. 'S bldg, if you don't know where this is just come to the club station and we will go from there.

Last month I pulled a real BONER I received from Carl W5JJ his input for the C & E. I then put it in a folder to keep it from getting lost, I then filed the folder with some other things and as a result it didn't get in last months C & E. I found Carl's article and it will be printed this month, I am really sorry about this.

Aeronautical Center Amateur Radio Club 1979 Annual Financial Report

INCOME STATEMENT
January 1, 1979 - December 31, 1979

INCOME Dues Employees Association Interest Other Income Total Income	\$1306.50 1691.00 16.93 342.75 \$3357.18	
Dues ARRI. CORA Collector and Emitter Periodicals W5PAA Station Maintenance W5PAA Equipment Insurance Postage Telephone Refreshments Micsellaneous	\$ 939.50 351.30 73.64 292.35 1265.85 130.00 11.30 269.80 54.17 245.10 \$3633.01	\$3633.01 -3357.18
Net Decrease for 1979		\$ 275.83



NOTE: The following article should have been printed a couple of issues ago, but due to a mixup in delivery it did not arrive to me in time. I would like to take this opportunity to appologize to Carl, W5JJ, for its late printing. It's a fine article and I'm sorry that it's late. Sorry Carl.

Bob Graham, WB5NSV

RADIOKIT CATALOG

Obtaining parts for building projects is an ever-growing problem. Recently Diane and Jim Fisk (he's WIHR) bought out a part of G.R. Whitehouse & Co. The part they now operate stocks many of the hard-toget components. Not only that, but they have no exorbitant minimum order point. There is, however, a \$2.00 shipping and handling charge; one can live with that.

Readers of the C & E can obtain a free catalog by writing to Radiokit, Box 429, Hollis, NH 03049, and mentioning that they heard about it by reading the C & E.

The catalog is a honey. It lists just about all those hard-to-locate parts building articles specify. I could name one or two it misses: Millen differential variable capacitors and RCA 40673 dual-gate FETs! But you'll find most others right there on its pages. The prices on some items are far from low.....but, heck, when you can't buy it elsewhere at any price, why quibble about the cost?

How'd you like to buy a kit for a split-band AF speech processor for only \$69.95? Or a R-X noise bridge kit for \$29.95? And those diecast boxes British construction articles always call for but you could never find in the USA......sweat no more; they're here! Big variable capacitors like those you used to see 20 years ago..... just don't remember too clearly the prices they used to bear! But you really can buy them now. One type you won't find is the three-gang or four-gang BC receiver type that once was common and now is eagerly (but vainly) searched for as the output capacitor for pi-nets. You can buy B & W coil stock and even those rare rotary variable inductors that'll handle the coil requirements for a kW antenna matcher. You can even get 4-prong or 5-prong plug in coil forms.....bet you haven't seen these listed in the past 15 years!

If you ever plan to do any building (or even dreaming about

building) by all means write for this catalog!

Just in case you thought that name, Jim Fisk, struck you as familiar, yes, he is the Editor-in-Chief of Ham Radio.

W5JJ

JOHN OTT BACK FOR A VISIT

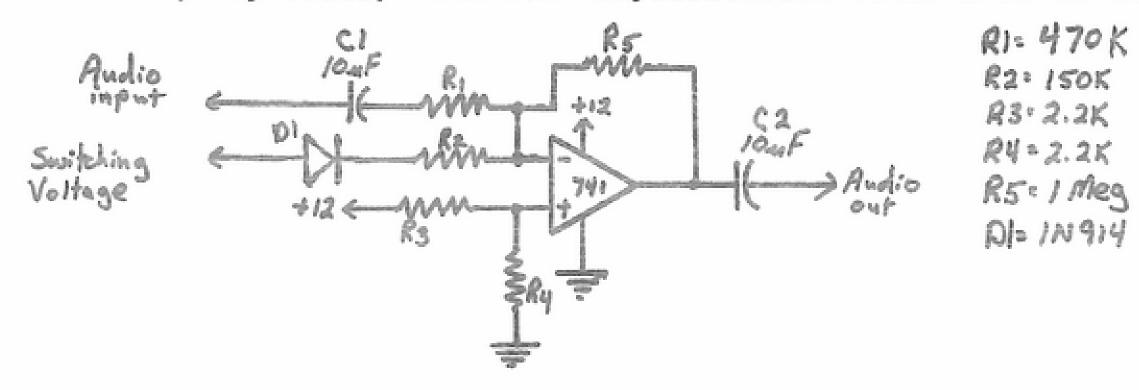
John H. Ott, W5HEV, one of the real old timers of the ACARC and the second W5 (and the first Oklahoman) on SSB, was in OKC for the holidays. John now lives in Sarasota, Fl, and hopes to have W5HEV/4 on the air soon. Look for him on 40 meters.

W5JJ



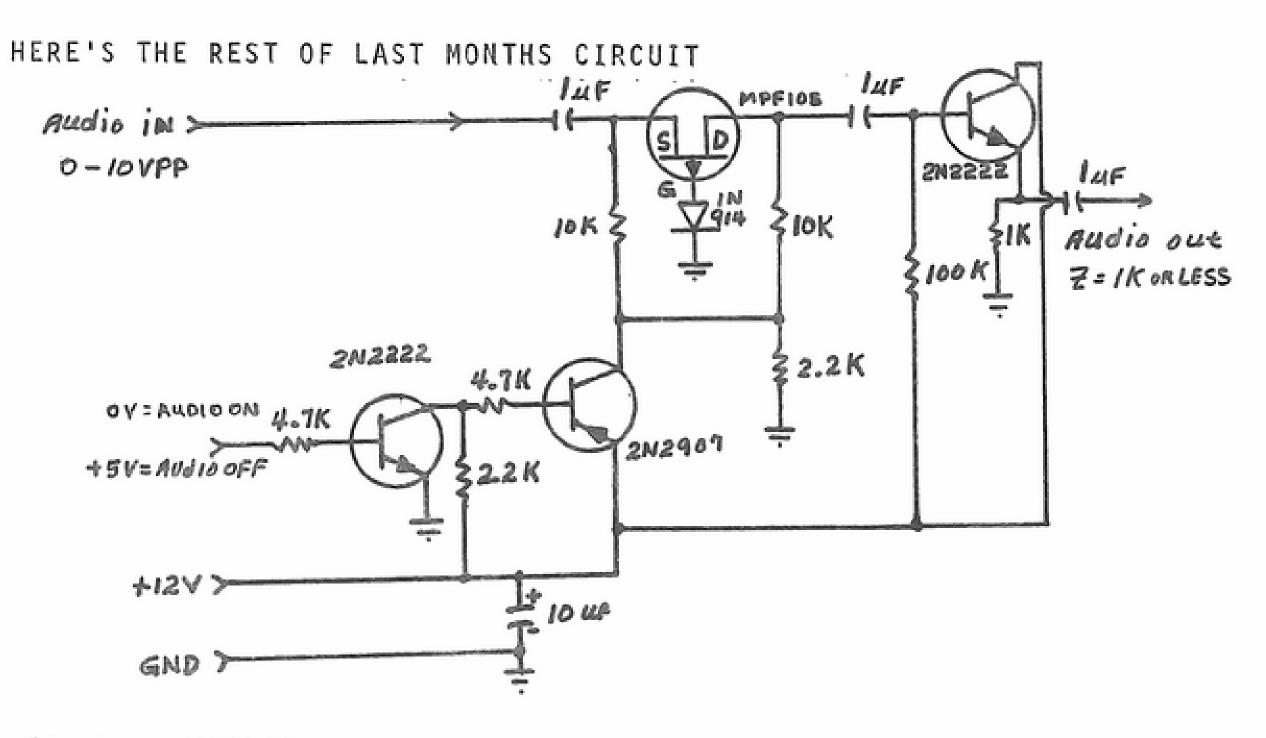
Still Another Audio (AC) Switch

After reading Mike Salem, N5MS, article in last months C & E on Audio switches, I suddenly (quite by coincidence) found myself in need of a good yet simple solid state audio switch and amplifier. After some trial & error, I finally landed on what I consider to be a very good switch, especially when some amplification would also be useful.



In the circuit shown the "741" op-amp is wired as a normal (single polarity) inverting amplifier, with a DC output offset of 6VDC to prevent signal clipping. Audio coupled in by Cl is amplified by the amplifier with a gain equal to R5/R1. It should be noted, that the op-amp will begin to saturate with an output that tries to exceed 6 volts peak. Switching (Control) signals are applied to diode Dl which passes this signal to the amplifier. Resistor R2 is selected to cause the amplifier to saturate when a high is present. (The values shown are for TTL switching levels.) All this brings us to capacitor C2, which looks innocent enough. Almost like a coupling capacitor. While this is true C2 also serves block any DC voltage which may be present, thus giving a nice AC audio output.

Bob Graham, WB5NSV



73, Bob, WA5CJG



MINUTES OF THE FEBRUARY MEETING OF THE ACARC

The meeting was called to order at 8:02 P.M. by President Bob Pace, WA5CJG. There were 40 members and guests present. Following the usual round of self-introductions, several reports were given. The monthly CORA report was given and was followed by a report on clubs buying portable generators by Bill Skipper, KB5BS.

President Pace reported on the WR5AVM repeater status -- it had been down for repairs to the Autopatch equipment, but at this writing

is doing fine.

Due to the resignation of our club treasurer, a special election was held to fill that position. Larry Bugg, WB5AAY, was elected by

acclamation. Welcome aboard Larry!

George Lagely, W5NTL, and Gene Taylor, W5GC, have both retired from the FAA. These gentlemen were both on the ACARC Board of Directors. and left two open slots on the Board. Robby Runyon, AADO, and Bob Graham, WB5NSV, were asked to fill these positions. Both agreed.

A motion was made by Gene, WB5SQC, and seconded by Jim N5BEQ, to support a raffel at Ham Holiday again this year. Motion Passed.

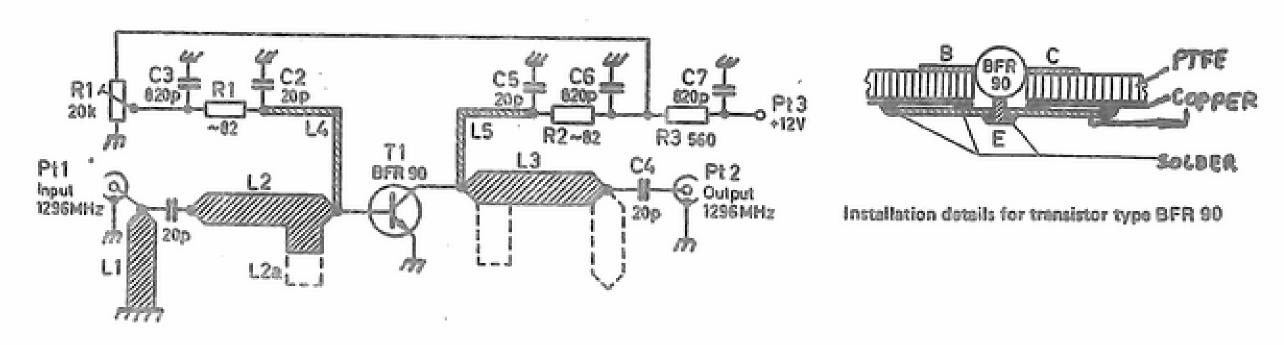
The program of the evening was given by Bob Pace, WA5CJG, on

frequency counters. A very interesting program Bob.

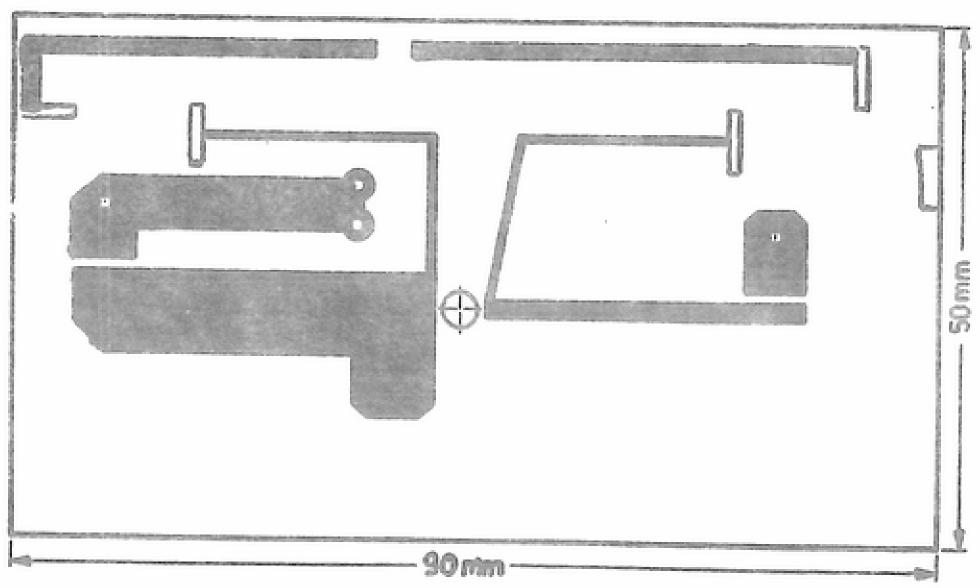
The meeting was adjourned for refreshments at 10:00 P.M.

Bill K5KDR for Bob WB5NSV (Thanks Bill!)

1296 MHZ R.F. AMP.



PC BOARD LAY OUT USE 16"THICK (TOFE)



-40-

NEXT MONTH COMPLETE CONVERTOR 73, BOB, WASCIG

March 1980

COLLECTOR AND EMITTER MAGAZINE EVALUATION

The Collector And Emitter magazine has been published by C.O.R.A. for five years now. Prior to 1975 this magazine was published by the Aeronautical Center Amateur Radio Club. An evaluation of operation under the C.O.R.A. banner is presented here in two PIE charts showing a summary of the kind of articles appearing during this five year period. PIE ONE shows the proportion of all 637 articles that I considered to have lasting interest. There were many articles that are not counted in this analysis, such as club business, minutes and commentaries by club officers. These were not entered in the indexes either since they were considered of value for only a short period of time to a limited number of the readers.

PIE TWO shows the detail of the high calorie slice of PIE ONE. All of the 240 technical articles published during the last five years in C & E are represented. These two charts were derived from the annual indexes by counting the articles listed under the various generalized headings in the indexes. Some groupings were changed to make the pie charts more informative. For instance, some new group titles were used in PIE TWO for articles listed under TECHNICAL in the indexes.

You may find the actual quantity represented by a pie slice by using the following formula:

Quantity = Pie Total x Percent

Those who wish to make a more detailed study into the content of the five years of publication may refer to the various indexes. Here is an index of the INDEXES for your convenience.

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INDEX YEAR LOCATED IN C & E FOR:

1975 - - - March 1979, page 13

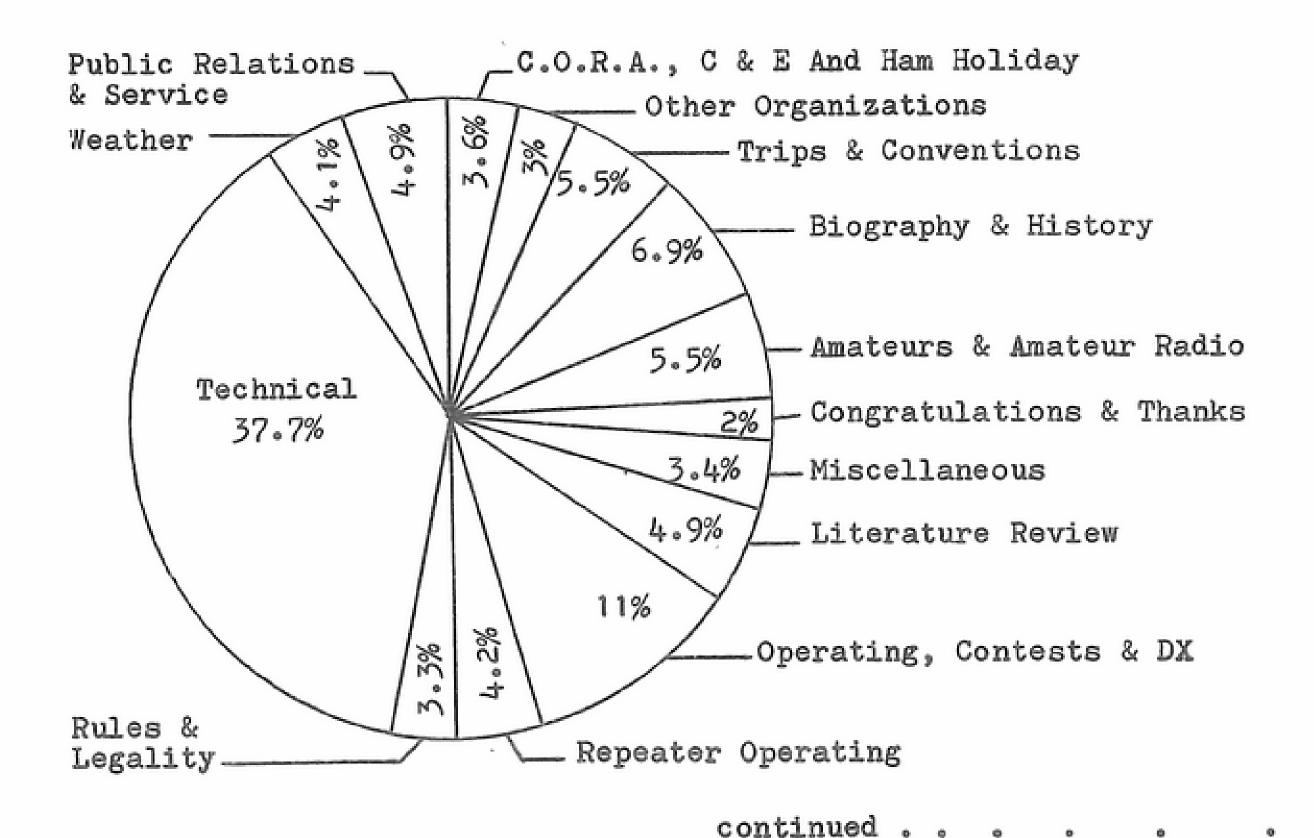
1976 - - - January 1977, page 14

1977 - - - February 1978, page 20

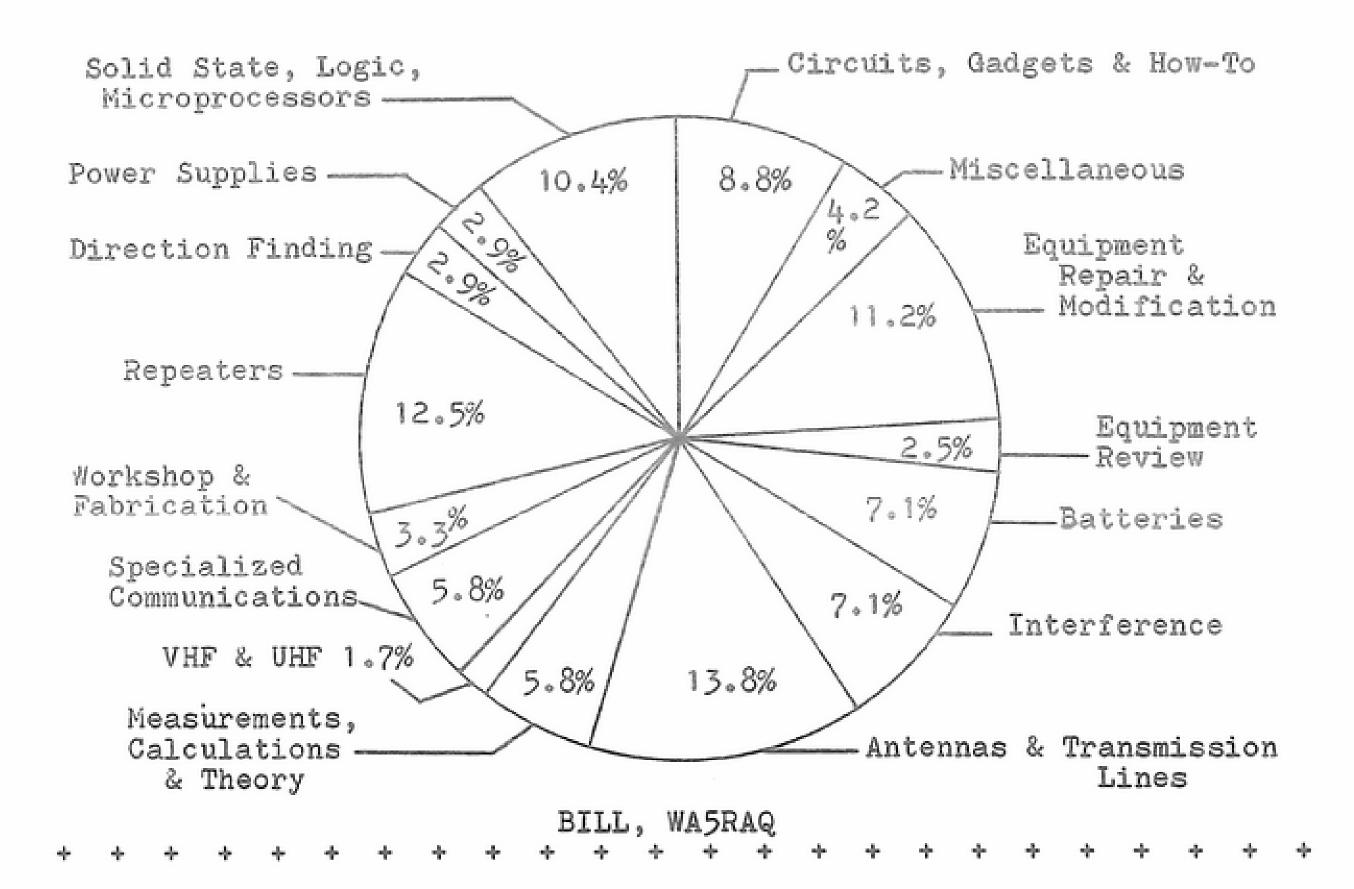
1978 - - - February 1979, page 15

1979 - - - February 1980, page 39

PIE ONE Total 637 articles, all subjects
```



PIE TWO Total 240 articles, technical subjects



S	L	Z	D	Ε	М	Н	A	С	Ε	G	0	Ι	K	1.	MARS	16.	Capacitors
Q	U	N	F	R	Ε	С	Ε	I	٧	Ε	R	Н	L	2.	Milspec	17.	Resistor
C.	A	P	Α	С	Ι	Т	0	R	S	٧	A	χ	M	3.	CORA	18.	Electron
В	А	Z	N	P	R	Α	T	L	S	В	D	γ	С	4.	Ampere	19.	Meter
М	W	Ε	Α	В	D	P	U	F	S	М	I	Т	Н	5.	ARS	20.	Band
I	J	М	I	L	S	P	Ε	С	М	Т	0	R	S	б.	SSS	21.	OM
R	В	Α	Н	C	S	D	N	0	Ε	F	Ε	Α	G	7.	FM	22.	XYL
Н	Ε	Ŗ	K	0	В	0	0	R	Т	Т	γ	N	P	8.	Repeater	23.	Linear
I	J	S	L	М	R	R	Ε	Α	Α	R	Q	S	F	9.	Pulse	24.	Nets
W	Ι	L	I	T	М	P	A	Ε	R	Α	T	М	S	10.	LSB	25.	Traffic
A	γ	Т	С	S	М	T	P	Ε	Т	F	S	I	Q	11.	Receiver	26.	Logs
χ	Т	Ε	L	Α	Т	Ε	Т	Q	N	F	G	Т	S	12.	AM	27.	RTTY
Z	L	S	L	Q	R	Ε	М	Z	D	I	0	D	Ε	13.	Radio	28.	IF
Ε	Α	С	Ε	S	M	S	R	С	Ε	С	L	G	٧	14. 15.		29. 30.	MHO Patch

Submitted by Mike Schenkle, W5VXU. (Ed.: I retyped it so it would reproduce. If you can't find them all just say joe messed up.)



THE ZANY NEWS FREQUENCY

By JOE, WA5ZNF

SOME CHANGES SOME REASONS SOME AGREE

After our experience last month with the weather delaying the mailing of C&E from Wednesday night to Saturday morning there was a great hue and cry to change the mailing time to SATURDAY MORNINGS - So I did some poll taking (non scientific) and decided that the majority wanted to change to Saturday morning. Therefore, the April issue will me mailed by three smaller clubs (EARS, SHAWNEE, CHOCTAW) at the Okla City Red Cross building Saturday morning March 29. I will be there and set up to start the first arrival at 9:00 AM. It takes a minimum of 10 people to do the job right.

For those not familiar with the location of the Red Cross, it is on the corner of 10th & Hudson in Okla City. We use the back door, not because we are inferior but that is where the room we use is located. There is a little street (alley like) parallel to 10th but behind the building. Unles the Red Cross has an emergency going there is plenty of parking space, another lot is on the north side of the "street".

The Oklahoma Central VHF Amateur Radio Club has their club station there and has a coffee & donut eyball session every Saturday morning. We will provide an extra dozen donuts and the "kitty" will furnish the coffee. They invite you to join them on mailing Saturday any other one.

EDITORS NOTE - You will now have a couple of extra days to get your camera ready copy in, since the PASTEUP day is also being changed to the Saturday morning before mailing. LOOK AT YOUR C&E CALENDAR! This doesn't mean that you have to wait till Saturday. Your copy can be mailed to C&E box #, brought by my house, placed in an envelope plainly marked Collector & Emitter Copy and slipped under the radio room door, or of course you will be most welcome to come down that morning and help edit and past up. Need help? Call me.

* * * * * * *

Look on page 3. Many requests have been made to return to the listing of clubs and officers and meeting times and places on one page. With 18 member clubs it got too crowded using regular size type so I typed it oversize and reduced it to fit the available space. It will be reduced again by the printer so let's see how it will look. I might add that magnifying glasses are very cheap. My eyes are 67 years old and the small type, which you will need to refer to only on occasions, is quite readable. (Of course I also have the double size copy to refer to if things get too bad, Hi:) The club mastheads will be changed to delete that information and give room to list repeater frequencies or any other message that club wants to get over to their sister/brother clubs or the fraternity in general.

I propose to put all CORA club's repeater frequency(ies), autopatch availibility (open, private), access, etc.

The first page, only, of each clubs section will have a full size logo and any infirmation desired by the club, enclosed in a border 1° high x 7" long. On subsequent pages a 1" x1" club logo ONLY will appear top, left. That way the continoation from the earlier page can (will) start at the top of the page and add six lines of copy per page. If everyone will use that space and the full 7" width to type in we can save 10/12% in space, and thus cut costs. (I paid 30¢ a thousand more for the last lot of paper. It will take 11,000 for this issue.). I will try to contact all club editors and contributors in plenty of time for the next issue.

Joe, WA5ZNF

See individual club sections for times, places & details.

360	MARCH 1980 HAM HAPPENINGS												
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday							
						1							
WHEATSTRAW	TRI- CITY	MORI			ACARC								
2 OKC	3 CLUB	4	5	6	7	8							
	CHOCTAW AF MARS	76ers		ALTUS		SCARS							
9	10	SHAWNEE 11	12	13'	14	15							
EARS	BARES 7 PM Red Cross	AUTOPATCH		EKAVE COUNTY/a	VHF	EDIT							
16	17	18	19	20 SPRING	21	22							
23	24	CORA			GOOD	CHOCTAWY SHAWNEE MAIL COLE							
PALM SUNDAY 30	31	SHAWNEE 25	26	27	28	LEAD VEAR DAY.							

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