



ITS TIME TO RENEW YOUR BARS DUES PLEASE REMIT ASAP

The following is a thank you from Allen Watson.

Dear friends in EARS. Thanks so much to all of you for the food brought and the contribution. A special thanks to all the O.M.'s for helping move the bed; sure never could have done it by myself. Thanks KA5WHI, KA5YPX and KA5YPG for being special deliverers of the food and card. Keep checking in. I need your prayers. Thanks again Allen Watson--- W5ERY and Family.

Something new is about to happen and that is if your interested. There is a club jacket in the making. EARS is currently taking orders for jackets, which are nylon with a kasha lining. The colors being white or royal blue. These jackets will have the EARS Logo on the back, your name and call on the front. The size's are SM 34 to 36, MED 38 to 40, LG 42 to 44, XL 46 to 48. The price for 12 jackets will be \$26.00 each. This price will change----- meaning the price will become lower as the number of jackets ordered increases. If you need more information call Mike KB5BIX at 341-6163 or Edith Vaughn KA5YPX AT 348-2961 or on the repeater.

There will be an Emergency Test to help us prepare for the up coming storm season. Keep an ear tuned to the repeater for more details about the test.

So that all are informed the following people will be assisting John WB5SYT during the storm season---Ken N5DBM will be in charge of the net controls, Lee KA5WIS will be in charge of the spotters and Mike KB5BIX will be in charge

of logging and act as assistant net control. If you want to be a part of the corps then get in touch with John WB5SYT.

Hamp-out time is just around the corner so get the tents and campers ready for this one which will be around the month of March or April lets go for it and have a lot of fun.

Larry N5IXV says he need some help or and assistant for backup when copying the WIAV bulletins on Mondays. If you feel like you can help him get in touch with him Im sure he would appreciate it very much.

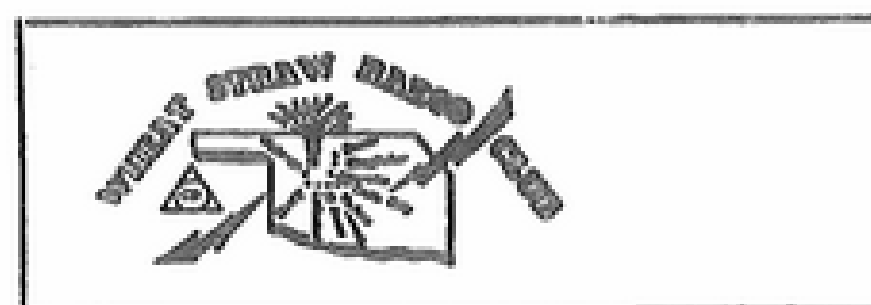
The technical committee and control operator committee has been consolidated into one body now known as the Repeater Committee and is composed of the following people--- Lee Vaughn KA5WIS, Ken Stepp N5DBM, Oscar Staudt WB5GCX, Mike Smith KA5MJT, Harold Velle, WB5ZKX and Brad Blaw, KB5CDB.

On March 1st there will be a change in the trustee of the repeater. The new trustee is Lee Vaughn KA5WIS. The repeater id will become KA5WIS/RPT.

The St Patricks Day parade in downtown OKC will be held on March 13. EARS will be helping out in the parade so if you can help then contact Phil N5HIP so you can get an assignment to help in the parade. The parade will be starting at about 3PM.

Want to go to BIG D!!! Well nows your chance to make the Dallas Sidewalk Sale. The trip will be on chartered bus leaving sometime early morn like about 3AM yawn yawn this is too early for this cat. The blessed event will be I think on Apr 2. Contact Phil N5HIP for the details

73'S
DBE WD5FHR



We had a very nice meeting February 14th, Valentines Day, hosted by the Canton members. Thirty-four people were present, including six guests. I really enjoy seeing visitors at our meetings. We like meeting new faces, and invite anyone to come to our meetings. We thank the members for arranging for us to use the Canton Community center. It is a very nice meeting place.

The business meeting was called to order by the President of our club, Neal, N5KCO. Joe, WA5FLT, Sec/Tr, read the minutes of the last meeting. Joe also gave the treasurers report which revealed that there are several members that have not paid their dues for 1988. Dues are due in December of 1987, for the year of 1988. It was voted to mail letters to all delinquent members as a reminder.

George and Ralph gave a report on the CORA meeting which they attended.

We are invited to Calumet for our March meeting. We always look forward to Margaret's home made goodies. As for Johnny, he always makes you feel right at home. Thank you for the invitation.

We had several announcements to make:

Leo, WZ5H, is holding classes for Novice and Technician Licenses. At the present time enrollment is at thirteen. If anyone is interested, contact Leo (146.610).

February 27th at 9:30am, the National Weather Service is holding a seminar in Norman.

On March 19th there will be Amateur Radio testing at Fairview. Leo will probably be able to fill you in on the time and place if you are interested.

March 28th, the National Weather Service will be holding a seminar in Calumet

CONTINUED ON ANOTHER PAGE

1 AERONAUTICAL CENTER ARC MEETS: FIRST THURSDAY, FLIGHT STANDARDS BUILDING. FAA, SOUTH MACARTHUR 7:30 PM PR BOB PACE, WASCJG 376-3569 VP S/T JACK INAN, WBSVH 677-8537 EDITOR: BOB PACE, WASCJG 376-3569
2 CENTRAL OKLAHOMA VHF MEETS: 11:00AM THIRD SATURDAY, THE BRICKS RESTAURANT, 3100 N PORTLAND, OKC PR JIM WILLIAMS, K5VAL 789-0769 VP LAST ONE TO ARRIVE AT THE MEETING PLACE SE JOE BUSWELL, K5JB 732-0676 TR ELLARD FOSTER, W5KE 789-6702 EDITOR: JOE BUSWELL, K5JB 732-0676
4 OK CITY AUTOPATCH MEETS: 7:30PM, THIRD TUESDAY SALVATION ARMY, HW 50 & PENN PR GEORGE ADKINS, AD1B 722-0074 VP DENNIS PATTERSON, W5C8H 498-0769 SE DAVID CAREN, KFSEB TR MIKE CRENS, W500B 722-2638 EDITOR: CHUCK MILHITE, K5NK 721-4926
5 OKLA UNIVERSITY ARC MEETS: 7:30PM SECOND TUESDAY (SEP-MAY) 119 WILSON CENTER, 1334 S JENKINS PR FRANK DONALDSON, W51QJ 329-4172 VP JOHN MUSTENBERG, KESN 325-2382 S/T JIM GREENSHIELDS, W5HPU 321-9981
6 ALTUS ASSOCIATION MEETS: 7:30PM SECOND THURSDAY NORTH MAIN FIRE STATION (CD) ALTUS S/T MIKE SULLIVAN, W7DNU 477-2938 EDITOR: MIKE SULLIVAN, W7DNU 477-2938
7 BICENTENNIAL (76er) ARC MEETS: 7:30PM SECOND TUESDAY KIP'S RESTAURANT, RENO & MERIDIAN PR DENNIS NUSSE, KAS6TH 524-4670 VP DICK BAKER, W5TNN 685-2867 S/T JERRY SPROUL, W5AUH 354-0017 EDITOR: JERRY SPROUL, W5AUH 354-0017
9 WHEATSTRAW ARC MEETS: 2:30PM SECOND SUNDAY. LOCATION VARIES. SEE CLUB SECTION FOR DETAILS. PR NEAL WSKCO VP PERRY JONES, W5MSZ 772-6063 S/T JOE GARLAND, W5FLT (CALUMET) 893-2660 EDITOR: JAN KUEHN, W5JUT (OKARCHE) 263-4480

11 EDMOND AR SOCIETY MEETS: ODD MONTHS, 3RD SUNDAY, 2:00PM EDMOND EOC. DINNER, EVEN MONTHS, 3RD FRIDAY. PR PHIL WOLFENBARGER, WSHIP 789-0681 VP DEE MIZE, WDSFHR 341-6163 SE GLORIA GUINN, K8586H 341-3886 TR EDITH VAUGHN, K5YPI 348-2961 EDITOR: DEE MIZE, WDSFHR 341-6163
12 QUARTER CENTURY W A MEETS: QUARTERLY AT VARIOUS PLACES. NET: 3855 KHZ SUNDAY AT 8:00AM. CHM ROBERT RUNYON, AA00 373-1818 VCH GENE HAILON, K5OLE 341-8289 S/T HOWARD BAKER, W5AS 721-5453 EDITOR: ROBERT RUNYON, AA00 373-1818
13 KAY COUNTY ARC MEETS: 7:00AM THIRD THURSDAY PIONEER DRIVE-IN BANK, PONCA CITY OK PR DAVE LAND, K0SFX 762-8616 VP STEVE SCOTT, KAS6K 762-0117 S/T HARRY BEATTIE, W50PR 765-3862 EDITOR: CHARLES NORTH, W5EYD 762-8136
14 CIMMARON ARS MEETS: 7:39 PM SECOND TUESDAY WXY PLAYHOUSE, 827 S 13, FAIRVIEW PR RAY BARNES, AB5Z 274-3334 VP LEO PEIL, W5H 886-2998 SE NADINE PAINTON, W5FHH 764-3599 TR DENNIS PAINTON, W5V 764-3599 EDITOR: JACK DAY, W5Z 227-3462
15 SOUTH CANADIAN ARS MEETS: 9:30AM SECOND SATURDAY, RED CROSS BLDG NORTH OU CAMPUS. NORMAN PR ANDI WOLFE, W5M 799-5150 VP DAVID MEDDERS, K5PL 360-4292 SE DORINDA SKAGGS, W5IVA 799-6727 TR MONTE BATEMAN, W5RZX 329-7485 EDITOR: DAVIS EGLE, K0SIT 321-7570
16 EDMOND AR CLUB MEETS: 7:00PM SECOND MONDAY. SEE CLUB SECTION FOR LOCATION AND TYPE PR MARK NORTHCUTT, W5DYI 755-4672 VP SANDY ORCUTT, KAS0NI 340-0034 S/T KAY NORTHCUTT, W5DYJ 755-4672 EDITOR: MARK NORTHCUTT, W5DYI 755-4672
17 OK CPM USER GROUP MEETS: 7:30PM SECOND THURSDAY OSU, ROOM 307 PR WILLIAM COOTER 360-2141 VP JIM WHITE 364-5289 S/T JOY NELTON 789-0280 EDITOR: WILLIAM COOTER 360-2141

18 GREAT PLAINS ARC MEETS: 7:30PM FIRST SUNDAY WOODWARD PUBLIC WORKS BLDG. PR WINDLE HATCHETT, W5PLN (FT SUPPLY) 766-3561 VP RON TICE, W506D (MOORELAND) 994-2138 SE BOB FORD, W50VT (GAGE) 923-7683 TR FREIDA PATTERSON, W5EOX (HOWD) 256-2111 EDITOR: LOIS FORD, W5J6B (GAGE) 923-7683
19 OKLA INDEPENDENT ARC MEETS: 7:00PM SECOND TUESDAY SOUTHWESTERN BELL OFFICES, PONCA CITY PR LIN JACKSON, KASZJM 762-7299 VP BRUCE LEFEBURE, KASZKI NONE SEC BIL WICHY, W0HCO 762-3297 TR DAVE WHITE, WNSLUI 765-5707 EDITOR: GLEN BISHOP, JR., KASPB NONE
21 TRI-CITY ARC MEETS: 1ST THURSDAY OF THE MONTH. PLACE: PR ROBERT BOLTON, KASRHU 379-2365 VP RON PHILLIPS, W5UPU 382-1656 S/T J. B. BILLS, KESMU 379-3992 P.O. BOX 655, HOLDENVILLE OK 74848 EDITOR:
CENTRAL OKLA RADIO AMATEURS MEETS: 7:00PM FOURTH TUESDAY, RED CROSS BLDG. 10 & HUDSON OKLA CITY (BACK DOOR) PR GARRY SKAGGS, W5SULK 799-6727 VP LEE WARD, W5H 789-0681 SE YVONNE MARRINER, W5TYM 379-3149 TR MARK KLEINE, W5H 329-9285
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Minutes of February Meeting

Meeting was called to order at the Bricks, February 20, 1988, at 12:24 P.M. by President Jim, K5VRL with fourteen members and guests present. Meeting minutes from the last meeting were accepted as published in the C&E. Jim gave the Treasurer's report for Ellard, W5KE, who was absent. Jim presented Jerry, KD5IS, a plaque for the many years he served as the club's president. Meeting adjourned at 12:32 so we could get on with the program. Jack Muse, WB5ZKZ, did a Show and Tell on one of his activities, knife making.

He is a journeyman bladesmith, recognized by the American Bladesmith Society. In order to reach the journeyman level he had to pass some interesting tests to show that he had the required metallurgical and knife making skills. The final tests on a bladesmith's products consists of a ductility test in which five blades are bent 90 degrees in a vise. They have to bend without breaking, or showing any cracks. This isn't too tough if the knife is dead soft, but a dead soft knife wouldn't hold much of an edge. The test knives have to also be able to cut through a one inch, free hanging, manila rope, in one whack. The same knife must be used to chop a 1 1/2 to 3 inch diameter oak log in two and repeat the rope cutting chore. It must then still be sharp enough to shave the hair off the arm. Pretty tough set of tests!

Dressed in the traditional bladesmith's uniform, blue Levi shirt, green suspenders, Oshkosh engineers cap; he passed around exhibits of his craft, from his earliest knives to the billets from which he will be making knives from next. For you technically inclined, his carbon steel knives are made of a special steel known as No. 1 RCS. Metallurgists will instantly recognize that as "Number 1 rusty car spring"! Thanks for the show, Jack!

Next meeting will be at the Bricks, same time, March 19th. See you there! Joe, K5JB, Sec'y.

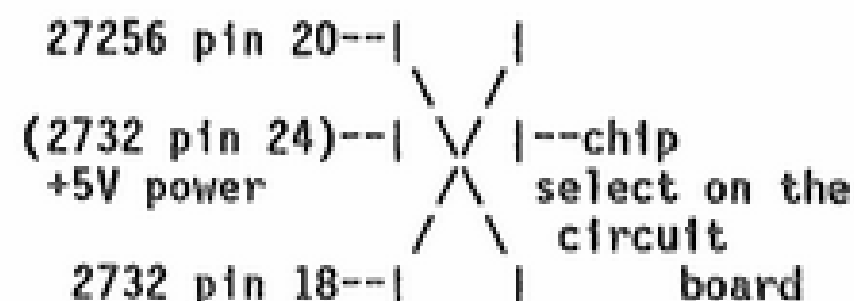
KISS EPROM Grafting Job

To use the TCP/IP or the STATS package (or most other tricky stuff) you have to get the TNC to run the KISS code. This is already taken care of in the AEA PK-232 and some ver-

sions of the Kantronics TNCs but on the TAPR 1 and 2 designs you have to use a special EPROM. There are three ways to go. You can use an EPROM that has the KISS code in it, you can use an EPROM that has the regular TNC code in it but waits on a for a special command to use it, or to load the KISS code. The third method is available for earlier versions of the TNC-2 EPROMs but not the current version 1.1.5. This method has the KISS code and regular code in the same EPROM and waits on startup for a command telling it which code you want to use. Loading the KISS code involves sending a HEX listing to the TNC from the computer, and it is a pain.

I am using a simple method of combining two EPROMs so either code is available with the flip of a switch. The normally used EPROM is a 27256 (or 27C256), an 8 by 32K device. The KISS code doesn't take much room but I selected a 2732A to hold it. The 2732 is an 8 by 4K device that has a pin out so similar to the 27256 that it is a natural. It only has 24 pins where a 25356 has 28 pins but when it is justified to one end of the socket all the pins come out OK except the plus power supply pin. I first tested the concept by loading a 2732 EPROM with the KISS code, cutting off the power pin (pin 24), soldering a piece of wire to it and bending it to fit into the socket for pin 28. It worked fine. Next, I took the 2732, bent pin 18 (chip select) so it stuck straight out from the device's body, cut a little bit off all the other pins, positioned it on top of the 27356, and soldered it, pin for pin, to the bigger chip. I bent lead 18 of the 27256 so it wouldn't go into the socket.

Next, I soldered some wires from the EPROM pair and the circuit board to a DPDT switch. Since the chip select line is active low, the unused EPROM must have its chip select line pulled to logic high to disable it. The active EPROM has to have its chip select line signal from the circuit board. The switch wiring looks like this:



(these cross connections jump over each other)

What this switch does is alternatively connect an EPROM to the chip select circuit, or to +5V.

Even if I had an EPROM that had both the KISS and regular code in it I

think I would prefer this method because it does not require my intervention to start things running if the TNC resets for some reason. The only disadvantage is having to mount a switch somewhere. I have been running this scheme on the prototype Tiny-2 which has no case. The whole schmeer is lying wide open on the bench and it is an ideal for junked up deals like this, sigh! Joe, K5JB

G5RV Antennas.

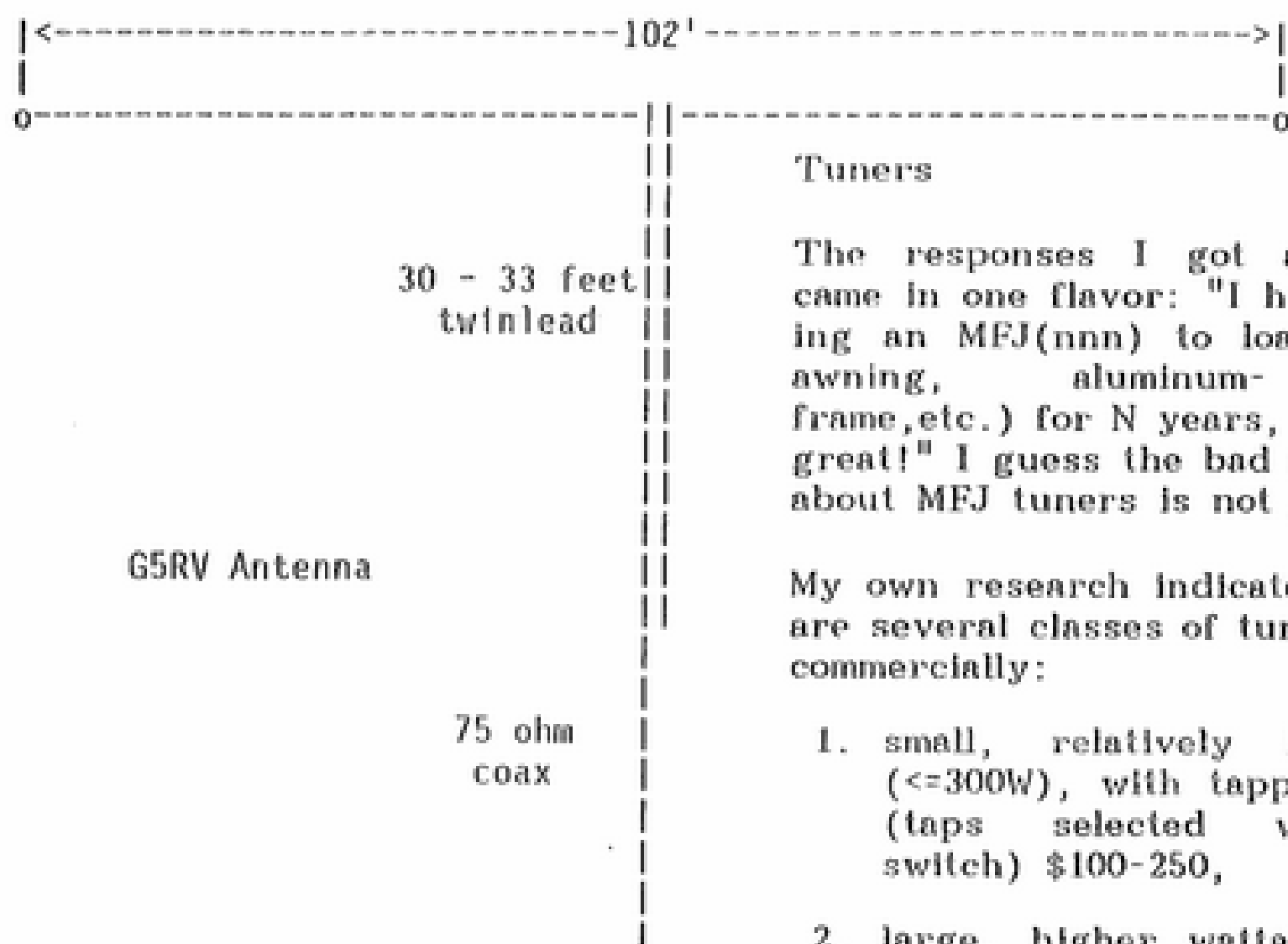
This month, I am going to take the easy way out and publish the results of someone else's research. As you will see, if you are interested in knowing all there is about the G5RV HF antenna there are some references cited that should satisfy your cravings. What follows is a digest of some messages that passed through USENET, the ARPA/UUCP/etc. computer net that a bunch of radioaficionados who happen to dig computer communications hang out on. My feed is from John, N5DKQ, an ex-Midwest City resident who happens to run a packet bulletin board and is merciful enough to send this bulky stuff around on floppy disk, rather than on the packet radio network.

I have heard references to the G5RV antenna but have not been too interested since I already have all the antennas I need, right Robins? Right Blue Jays? Right Sparrows? When this subject popped up on USENET the original inquirer collected the results and posted a compendium. It was so well done I thought I would grab it for all you so read. The following is from Michael Clark, AA4YH:

I recently posted a request for information on the G5RV antenna, and antenna tuners. Thank you to all who responded, you have been very helpful. I thought I would share what I have learned with the rest of rec.ham-radio.

The G5RV

The G5RV is a design by Louis Varney, G5RV (strangely enough!). It is a center-fed flat-top wire antenna, 1.5 wavelengths long at the design frequency (somewhere in the 20-m band). The antenna is fed by a stub of 300 ohm twin-lead, one-half wavelength in length at the same frequency (which turns out to be 30 - 33 feet, depending on the implementation). In the original design, this was fed by some length of 75 ohm coax, cut to match the 50 ohm transmitter output to the 300 tuning stub. So what you have looks like this: (Couldn't resist leaving his graphic in here. - JB)



The G5RV, unlike trap-type multi-band antennas, uses it's entire length on all bands. On 30 and 40 meters, the G5RV is 2-half waves in phase. On 80 meters, it behaves as a shortened dipole, matched by the stub. On 40 meters, the stub is .25 wavelengths long, which converts the very high impedance of the two half-waves to something near 50 ohms. It is reported that by shorting the center and shield of the coax at the transmitter end, and using a good ground, the antenna can be used on 160, but no-one seems to think it works very well.

Most G5RV designs these days use 50 ohm coax instead of 75 ohm, and most commercial designs use a balun at the 50-300 ohm connection.

The antenna was designed to work multi-band without the use of a tuner. However, it presents a reactive load to the coax on most bands. Older rigs with tube finals seem to tolerate this, but a tuner is recommended for rigs with solid state finals.

The G5RV looks like an excellent multi-band solution because:

1. It is shorter than a dipole on 80 (nice for small yard),
2. It is longer than a half wavelength on all bands 40 and above, which makes for increased efficiency,
3. It is designed to behave reasonably on specific ham bands,
4. It uses coax feed, unlike most multi-band wire antennas, which use open-wire feeder, or ladder-line.

Tuners

The responses I got about tuners came in one flavor: "I have been using an MFJ(nnn) to load a (dipole, awning, aluminum-window-frame,etc.) for N years, and it works great!" I guess the bad news I heard about MFJ tuners is not justified.

My own research indicates that there are several classes of tuners available commercially:

1. small, relatively low wattage ($\leq 300W$), with tapped inductors (taps selected with rotary switch) \$100-250,
2. large, higher wattage (1.5 - 3 KW), with roller inductors, \$300-600+.

Someone I talked to advised that you should treat the wattage rating on a given tuner as a very optimistic rating, and obtain one rated at around twice your intended wattage (applies mostly to lower priced tuners).

Some tuners include integral baluns, others will not load a balanced line. Almost all available tuners come with some form of power-SWR meter, which I do not really want, as I just purchased a nice Daiwa cross-meter meter.

Finally, I would like to include a section of some mail sent to me by "Alan L. Ibbetson, G3XAQ (mainly 20/40M cw-only):

I've found the secret to be in building a good balanced tuner. There's no magic about this. The thicker the wire in the coils and the wider the spacing on the capacitor vanes the bigger the range of impedances you will be able to match. Plug-in coils have less loss than switched ones. Silver plating probably helps on 10M, but I can't afford it! A symmetrical physical layout helps to preserve balance on HF. A big cabinet allows the coils to be positioned at least 2 coil-diameters from the cabinet sides to reduce losses. Home-brew costs about 20% of commercial.

Simple test for tuners: run 1KW through the tuner for 30sec, switch off, feel coil(s). If hot, tuner is no good!

So, that's about it. I have decided to buy a G5RV from AMP Supply, here in Raleigh. Jury is still out on tuner brand, but I will buy a commercial one rather than build.

Any more discussion on these topics are welcome.

73, Michael Clark AA4YH, Sun Microsystems, Cary, NC

In another message, Steve Wheatley, AT&T Consumer Products, Indianapolis, IN, contributed: "A good article by G5RV is in the ARRL Antenna Compendium. In the article, he discusses operation on 3.5, 7, 10, 14, 18, 21, 24 and 28 MHz!"

In the messages related to the subject, not all were fully in praise of the G5RV. Here is part of one from Bob Menton, KG3J, who challenges the supporters of the design to tell him what are the advantages over a plain vanilla flat top tuned with a matchbox:

Bob, K2PH, recently stated that the G5RV antenna needs a tuner on all but perhaps one band. He suggests, as an alternative, a 130 foot doublet fed via a tuner with open wire feed line. I'd like to suggest that the length of the doublet is also non-critical: If you only have 100 feet, or 70 feet, then put up a doublet of that length and feed it with open wire line through a tuner. It'll play, to some part of the world! I presume here that doublet users are not super-critical about the exact shape and orientation of their horizontal beam patterns; if they were, most would not be using doublets.

If what I (and K2PH) have suggested is valid, could an enthusiastic supporter of the G5RV antenna explain what its advantages are? At least the Mor-Gain multi-band doublet is truly resonant at some frequency within each of its operating bands. It may be fairly high-Q on some bands, but at least there IS some range of frequencies in each band where the Mor-Gain can be operated without a tuner. 73

Sigh! Like religion and politics, there are no simple answers for antenna questions. Joe, K5JB

Packet Activity

Well, has been intense this month, but mostly by others. I have been to Memphis, Chicago, and Washington, DC, since last month. By the way, Hoss, WA5ZAI, passes regards to all his Oklahoma friends. He keeps up with our antics via C&E.

Dave, WD5G, got the newest version of the TCP/IP and brought the code over so I could run it here and give him someone to test it with. One new feature we were looking forward to was its ability to do straight AX25

PCARR

Thirty six folks were at the February meeting on the 13th. The treasury balance was about \$1400 after paying the phone line installation charge of \$89.

The Phone Patch

was back online again with SCARS paying all of the costs. SW Bell policies require a non residential rate of \$55.43 per month. The phone line will cost the club \$665.16 a year.

Andi recommended Dave, KSPL, for alternate trustee of the repeater; Steve, N18W, for alternate trustee of the HF station; and Mark, N5HZR, for chair of the technical committee. The recommendations were accepted by the members present. Gordon, W5OU, and Leland, W5MCN, continue as trustees for the repeater and the HF station.

Public Service

projects will be emphasized this year sez prez Andi. Steve, N18W, will be coordinating a communications

group for the Norman bicycle race on the 23-24 of April. Gary, WBSULK, will volunteer SCARS for communications for the Olympic Festival in 1989. A special one day course on "Introduction to Disaster Services" will be held at the RED CROSS on March 5. Andi encouraged members to sign up for this course to gear us up for helping the Red Cross when an emergency occurs.

A two meter packet station will be set up at the Red Cross soon. The equipment is being donated by Mark, N5HZR; Ron, N5HZS; and Andi.

Gary, WBSULK, reported on the last CORA meeting. Ham Holiday will be held on the first weekend in August at the Lincoln Plaza. CORA will be sponsoring a scholarship to be awarded to an academically qualified high school student to attend college or tech school. Qualifications and application instructions will be published well before the first award which is scheduled to be presented at HH89.

Dues are due

now. If you can't get to the Red Cross this Saturday, mail your \$16 check to the treasurer: Monte Bateman,

WBSRZX, 1514 Denison Drive, Norman, OK 73069.

Spring Classes

for earning the Novice and Tech licenses are planned to be held on Monday nights at 7 pm starting on March 14. The classes will run for eight weeks and a VE exam will be offered at the end of the class, during the week of May 2. If you know someone interested in becoming a ham, have then contact Monte, WBSRZX, or Davis, KD5IT.

Repeaters

and how they work will be the subject of a program to be presented at the March meeting. Ken, N5KUK, will tell us all we need to know (and maybe more) about these wonderful gadgets.

Remember that SCARS members and anyone interested in amateur radio are welcome to meet at the Red Cross in Norman every Saturday morning at 9:30 am. There is always a pot of coffee and several boxes of donuts. The next business meeting will be held on Saturday Mar 12, at 930 am.
-----KD5IT-----

BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

HELP!!

In the last few years, the membership of the 76ers has dropped off sharply. In fact, at one period of time, the entire meeting consisted of two to three people having dinner. Fortunately, in the past 6 to 9 months, membership has slowly started to rise, and we are seeing 8 to 10 people consistently show up at the meetings. Still, with membership being so low, repeater up keep and maintenance has become almost impossible. It is with this in mind that we come to you, the amateur community, to ask for your help.

First though, we would like to extend an invitation to all radio amateurs, or any interested party, to come join us. We meet the second Tuesday of the month at "The Bricks"

N.W. 31st and Portland. The Meeting starts at 7:30pm, but, why not come early and have dinner? Dues are \$5.00 per year with repeater support optional. Again, the invitation is open to all interested persons.

Now for the help part. For the last few months, the 76 machine has been experiencing some problems. As these problems were being discussed in the meeting, it became apparent that the club did not have the funds to complete all the repairs. (That old membership problem again). The duplexer will not tune, and the SWR is high due to an old weathered antenna we are using. The solution to these problems is to buy a new antenna, and attempt repairs on the duplexer. If that fails, then replace the duplexer. All of which takes money that the club does not have. So, we are asking the amateur community, you, for help. We need money! If you have an interest in seeing a free and open repeater

continue in operation, please consider donating \$1.00, \$5.00, \$10.00, or what ever you can to our repair fund. Anyone wishing to do so can send there donation to:

Jerry Sproul N5AUH
Treasurer Bicentennial ARC
128 Ranchwood
Yukon, Oklahoma 73099

Also, Dick Baker WB5TMW, would welcome anyone wishing to help out with repeater repair and maintenance. Contact Dick if you are interested.

We, the 76ers, would like to thank all of you for your support in getting this repeater back on the air and keeping it there.

Dennis Musser KA5GTM
President Bicentennial ARC

FORSALE: UHF Repeater made by VHF Engineering. Set at 444.05 with duplexers tuned to frequency. 5 foot weather proof cabinet, \$850. Would sell less cabinet. Harry Watts, KC5OU, (405) 995-4761, Vici OK.

connections. We don't have the documentation yet so we might not be doing it right but all we have been able to do is straight terminal to terminal stuff, no file transfers, etc. It is disappointing if it can't read a directory and pass a file from a host computer. It does the thing it is designed to do quite well, that is computer to computer file transfers and mail handling.

It's mail handling ability is improved with the new version of BM (B'dale's Mailer). It is pretty smart. When Dave did not have his host name set up correctly, the program on his computer told mine that it didn't know him. Mine, in turn added a note that it was not delivered and returned it to my mail queue for me to see. When I saw that, and learned he was set-up, I forwarded the mail back to him (sender unknown messages, and all) without having to do a bunch of messing with it. It seems to transfer files real slick.

We started the TCP/IP up on .01 the other night and I caught WB5ULK's remark about that K5JB junk so we moved to .05. You got good ears, Gary. I was on the dummy load with incidental radiation. It is pretty obnoxious with all the control characters it sends out.

Dave is bringing the documentation over tonight and we will look at the AX.25 possibilities.

We will have to get more experience on that one before I get too carried away writing about it. Joe, K5JB

Net/ROM

Doug, N5DUB, and Larry, WA7UIB, prepared and mailed out a nifty newsletter to those who are interested in Net/ROM. Called NODES, it contained updates on the Purcell Net/ROM status. Mike, N5ANG, and Glen, NF7T, have put a VHF/UHF node together that seems to be working quite well.

The UHF linking seems to be working well and is taking some of the Net/ROM traffic off of .01. I overheard some plans of maybe adding an intermediate UHF hop between Cedar and OKC to make that path better and some discussion about adding a UHF hop around Wellington to make the Cedar to Wichita hop a possibility.

There is some action in Kansas to get some Net/ROM nodes going. Wichita and Lebanon are already on and Hayes, WA0ZBL, is getting one on at Emporia. There are some additional Kansas sites mentioned in NODE.

Included in the NODE was a list of about 100, or so Net/ROM nodes within reasonable distance from here.

Pond (Pond Creek) had some real problems and Larry and Doug traveled up there twice in the last couple of days to straighten it out. Doug was going to send me some notes for the C&E but was diverted by the emergency trip to re-do the job. The following was in my buffer when I got home a day after my deadline. (You will never know what got cut out!):

N5DUB>K5JB,OKC*(1,S0,R0,c,p)

Hi Joe --

I imagine we missed your C & E deadline. Larry and I had to make an emergency run up to POND again on Sunday afternoon/evening, and didn't get back in from our little round-trip 260-mile jaunt til midnight. As you know, Larry replaced the POND antenna with a nice shiny AS 4-pole on Saturday. He and Steve noticed some irregularities in the behavior of the 170-watt amplifier, and did some work on it. So naturally, just as Larry was settling into complacency, right after noon on Sunday, POND started up with the intermittent again - Dave FX said it was clanking back and forth from S1 to 60/9 in Ponca. Sooo, Larry and I took my amp up there, so he can watch the other one on the bench for a while.

When POND is working, it really is a superb site, and it appears to be working great guns today. Sure was a long drive, but I think it's worth it.

The "Node" is strictly a volunteer thing, so we'll print it when Larry or I have the time and stamps and copier money. If folks want to receive a sample copy of the Node, or have anything they'd like to share with us, have them connect to Larry or me, or SP N5DUB @ WB5RZX. Feel free to use or reprint any of the info in the Node whenever it is useful. Next month, Larry & I will try to get some newsy stuff to you before your C & E deadline, too.

Adios & 73 -- Doug

I like that! I didn't have to edit anything -- and he didn't even say "73's", heh!

The NODE would be worth getting so let Doug know you want it. (and help him out on the stamp money, eh?)

Dave, WB5FWE, has been doing some shuffling of his Net/ROM equipment to enable users on .01 to access the National Weather Service information on .09. Which leads to another subject...

Computers Being Useful on Packet

Dave, N5PL; Monte, WB5RZX; and I don't know who all, have been programming a computer to handle the information from a Weather Service computer and make its information available to those who check in via packet radio. In the last month I have been seeing a lot of testing on .09 and gather things are going well. I understand they are planning on writing a program that will permit a computer in the weather network to receive the maps in compressed form and display them. Sounds neat!

By the time you read this, the weather seminar in Norman will be history. If you are keeping up with things, you already know about the nifty newsletter, Oklahoma Weather Watch, published by Andi, WU5W. The January 25, 1987 issue contained a good article, Fundamentals of Cloud-to-ground Lightning, by W. David Rust, N5KCW, a guy who has a lot of interest and knowledge in that subject. The newsletter is available by mail and in electronic form on the WB5RZX (and K5JB) bulletin boards.

Which reminds me, at Mac's, K2GKK, and others', suggestion, I reorganized the K5JB bulletin board to cut down the long list of things that had accumulated in the message directory. It now has five directories: Messages, Bulletins, Technical Information, Software Information, and Long Files. That last one has some killer whale length stuff, but off on 146.415 it doesn't do any harm if you want to dump stuff all day long. I decided a long time ago that, at the risk of offending someone in Poke 'n Plumb, I would move it off of .01. I have not regretted that decision.

My smart monitoring program is still working fine and .01 is almost looking civilized as a result of using the thing. Dave, WD5G, finally asked me for a copy of the latest version and then said, "Good Job!". Man! That made me feel good. I haven't done any more work on the one that will use the standard TAPR/N2WX code but if I ever get back to work on it, and finish it, it will be handy for you who want to enjoy .01 again, hi!

The line counter says I had better wind it up for this month. I am going to experiment with this one and dump it to a laser printer using a proportional type so I have no idea how long it will be after the runoff program does its thing to the lines. Until next month, ta ta! Joe, K5JB.

For Sale Heath SB-230 linear amplifier, 80 through 10 meters. Spare final. \$300.00 Tom, W5UOM, 794-2341

CORA MINUTES

The January meeting was opened with introduction of the following directors: ACARC Tom Mangham, OCAPA Garry Norris, WHEATSTRAW George Machino & Ralph Wilder, EARS Lee Vaughn & Frank Tassone, SCARS Marshall Maddox, Monte Bateman, Garry Skaggs & Dorinda Skaggs, OUARC David Medders, EARC Phil Wolfenbarger & Lee Ward, C&E Joe Harding, TRI-CITY Yvonne Warriner, Robert Dolton & John Warriner, EX-OFFICIO Jim Buswell, VISITOR Nora Ward. No treasurers report: absent. Corrections of the minutes by Phil Wolfenbarger and Jim Buswell. Volunteer examination reported 11 applicants, about 70 per cent passing rate.

C&E report: He had not much to say. Postage costs for mailing an issue was about \$80.00 and printing about \$200.00. He DID know whether printer had been paid. No.

Ham Holiday reports there is not a list of dealers yet. No letters had been mailed but thought that in a couple of weeks it should be out. Missouri Radio has had no gripes since Mark talked to them.

In a motion by John Warriner and second by George Machino was made to have Ham Holiday at the Lincoln Plaza Center. Motion carried.

Gary reported that after talking with Jerry KD5IS he would not have the time for Bingo at Ham Holiday. Talk-In has no chairman. QCWA was discussed at length about the breakfast and the ARRL booth. There was a motion made by Phil and second by Lee W; if QCWA withdraws from CORA they would not participate in breakfast or the ARRL booth. Motion passed.

Olympic Festival: Director of volunteers John Ross and Jim O'Toole, Gary will meet next week with them.

Old Business: Scholarship program proposal (see separate report) proposed by John Thompson and David. Passed. Joe Harding reported no committee met.

New Business: Lee Ward N5HIR submitted her resignation as Vice-President of CORA. Election for Vice-President at next meeting.

Yvonne Warriner, Secretary

WHEATSTRAW CONTINUED

at the Auditorium, 7:00pm.

April 10th is the Mooreland Hamfest.

April 17th is the Lawton Hamfest.

These were all of the announcements made at the meeting. Following our business meeting we had a very interesting presentation by Ernie, who is chief engineer at Canton Lake. Ernie had a slide show on different things dealing with the lake and the beautiful surroundings that can be enjoyed at different times of the year.

Thanks Ernie for all the work that you put into your

presentation. I, for one, really liked seeing how some of the areas have been improved.

We then had refreshments by the Canton Lake ladies. Thanks a lot, everything was delicious.

Remember, net is held every Wednesday night at 9:00pm at 146.610 and members and non-members are all invited to check into the net. We like hearing from everyone.

See you in Calumet, March 13th. Until then, 73 to everyone.

Jan, N5JUT

ZNF ZNF ZNF: Some of the following letter is for me, but most of it is for all of us, so go ahead and read it. It might give someone an idea of how to cure the Collector & Emitter's monetary problems. If you agree, get your club to act on it -- and have your CORA representative come to the next meeting and do something. ZNF ZNF ZNF

Joe Harding
1020 Arthur Dr.
Midwest City, Okla. 73110

Watonga, Okla 73772
February 18, 1988

Dear Joe,

I have thought about CORA and the Collector & Emitter a lot. I thought I should consult you before I said any thing at the meeting. I have enjoyed reading it, and wish there was more interest taken it by all clubs.

To prevent the possibility of the finances getting in bad shape. Make each club pay in advance at the time the club members reregister each year. I notice some years the mailing slips we have to sign are pink, white, and yellow. I assume they are filed under each clubs file. When the color changes it is time to pay for the C.&E. First I think each clubs sec.& Tres. should be responsive to the system that is set up.

I do not wish to put any more burden on you, thats why I wanted to write you first. If it creates more work for you, some one could be appointed to have a duplicate file, and they could call you when it is about time to cut a club off.

If our Wheatstraw club got behind on dues and the treasurer did not have the money, I would suggest each subscriber pay his or her subscription up to date, and then elect a new treasurer then. I hate to see the membership decrease any, in fact I would like all Oklahoma clubs join.

By getting all subscriptions at the beginning of the year you could then set up a monthly budget for the year. Think my suggestion over, if you had rather not be bothered with it fine, its just good business I thought.

"73" Joe
Ralph Wilder
Ralph Wilder
811 N. Barford
Watonga, Okla. 73772

kay

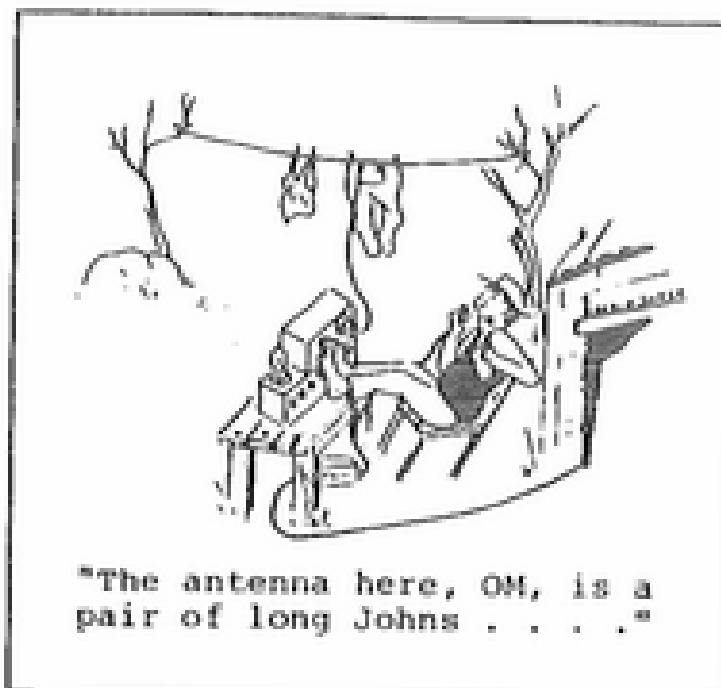
Well the February meeting was well attended even if it was two days early! We moved it to Tuesday so that we could meet with Norman Coffelt and Harold Fisher of the local Civil Defense group. I think we had a very interesting talk with him and learned more about his plans and well as helped fill him in on how we can help them.

Norman's group along with the NWS from Norman are sponsoring a weather seminar on Monday Feb. 22nd, I understand that six from our club were able to take advantage of this. Also, there is a full day seminar on Saturday Feb. 27th down in Norman that a bunch of us are planning to attend. I'll give a full report at our next meeting, hopefully a video tape of the highlights will be available by then too. Speaking of video tapes and our next meeting, we will be showing an ARRL tape on wire antennas. This is just one of several tapes available through the ARRL. If we can get it in time, we'll also watch the video from the weather seminar. That will be the third Thursday of March (the 17th) at 7p.m. in the Vo-Tech building.

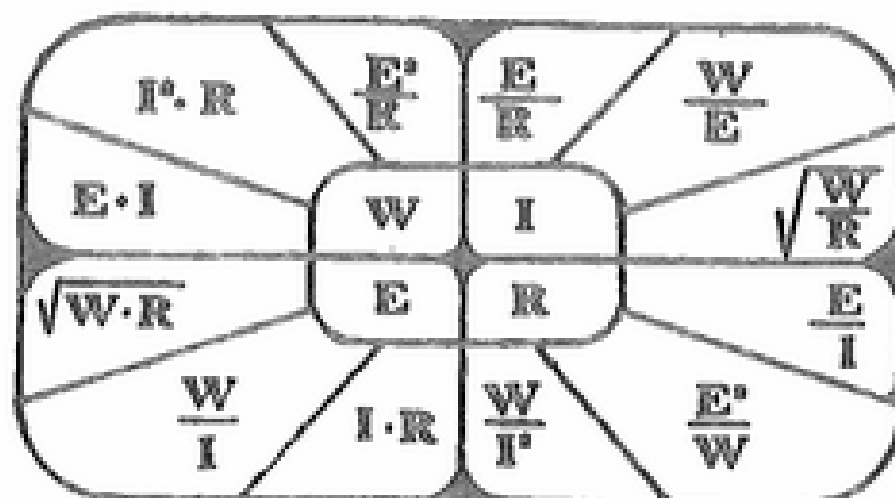
I think we'll hold our April meeting at the EOC just to give folks a chance to see it again. It's been several years since we've met there. I've been working on making my entire packet station portable (i.e. battery powered) and I should have it all working by then, I'll bring it along and demonstrate the link with the NWS.

Digipeater Update

W5TXF and I made it out to the site on Feb. 15th and installed the 11 element beam and fixed the channel on 145.09. It sure was nice up there 80 feet in the air with Jay swinging around like a monkey tying ropes on antennas and things. Did you know that those Rohn towers move quite a bit when you put several hundred pounds on the top and swing it around? Well, they do! I still can't figure out how Jay installed that huge DB ground plane on top of that tower so many years ago. I think he must have used a sky-hook. We got rushed towards the end and didn't have time to check the SWR on the new beam and there seems to be a problem. It's not getting down to Norman like it should from out there. So, that means another trip out the next time we get a warm day.



"The antenna here, OM, is a pair of long Johns"



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MORE KAY

The Net/ROM folks have put up a node down in Okla. City that we can use to get the NWS site now. I don't know how long they plan on leaving it up, but it sure makes things easy for now. Take a look at K5JB's article this month, he usually fills us all in on the latest happenings in packet here in Oklahoma. Well, it's time to get this column filed via packet, so 73 for this month. Dave, KD5FX.

101

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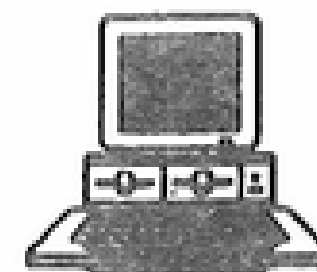
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SUCCESSFUL SUNDAYS

Club attendance has improved drastically since we decided to move our meetings from the first Tuesday evening to Sunday afternoon. Thirteen members and three guests were present in January and fourteen members and six guests attended our February meeting. Most members polled seem to favor the Sunday afternoon meeting times.

NEW RAILROAD SERVICE

Can you believe that a new railroad ran through Northwest Oklahoma? It's true, and as a matter of fact, there were two. The first occurred when the club voted to retain the three board members who were due to rotate. The second came flying through during the board of director's meeting when it was agreed to retain the reelected officers in the same positions previously held. The lucky passengers were Windle, WA5PLW, President; Freida, N5E0X, Treasurer; and Rod, WB5OVT, Secretary.

PAST OFFICER RETURNS

We are proud to have learned that Jim Phares, K5YZK, is back in our area and is currently residing in Seiling. Jim had been a very active member several years ago and had also served as GPARC secretary. Welcome back!

FEBRUARY MEETING

A special meeting was held by the GPARC for the month of February. Special? How so? It was held on the first Sunday afternoon at 2:15 as scheduled wasn't it? Correct, but everything except the usual date was special. For the first thing, it was held in the home of Lewis and Freida Patterson. That in itself makes it special because of their hospitality and Freida being an excellent cook might have something to do with it as well. Lots of visiting, and some planning on our plan of attack to take on the communication trailer started the afternoon. The latest ARRL video presentation was aired in the Patterson living room along with some of the highlights of past community activities in which the GPARC has been involved. Interesting things such as the removal of keys from a locked pickup bearing Kansas tags made up some of the footage of this

CIMARRON

I have a feeling that even in the middle of the political muddle we can all coalesce on one issue...this has been one loooooong winter. The seed in the bird feeder outside the window of my radio shack went down considerably when the snow just wouldn't go away. Now that the snow has retreated to the deepest borrow ditch drifts my customers seem to have drifted away also. Spring may not be too far away!

CARA's meeting Feb. 11th., seems to bear out this optimistic note. There was some discussion of Field Day plans. Steve Schoonmaker KF5SW has reserved a shelter at the Fairview Boat Docks for that date. That has to be considered a good early start in these Polar Bear days.

Denny Painton WK5V, admitted to having a birthday on this date and amid some joshing was sung the usual un-musical but heartfelt Happy Birthday song. Denny did not say how old he was but just the fact that he is still willing to have birthdays indicates that he is still young at heart.

Canton, America, may become the amateur Radio Center of N.W. Oklahoma if Leo, W25H and Steve KF5SW have their way. Their Novice class is well under way with 13 students. This is the largest class ever in this area. Robert Baker, Jim Mauldin, Loren Cox, Tom Adams, Marshall Alexander, Randy Dugger, Cheryl Baker, Tim Baker, Ashley Dugger, Sonny Adams, David Rumsey, Hod Elliot, and Cleophis Wooley, all of this area, are working hard toward their novice license.

An Up-grade exam with volunteer examiners is planned for March 19th,

video. Then the goodies. Lewis set up a deep fat fryer in the garage and proceeded to cook some of the best fish that we have ever eaten. The fish, hushpuppies, cole slaw and a choice of pies really topped off a very enjoyable afternoon. As always, our thanks to Lewis and Freida for the fine meal and excellent hospitality

NUFF

Guess that's about it. Lots of excitement and an abundance of basketball have been keeping everyone busy. Don't forget the March club meeting! For now, 73

Lois, N5JGQ

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Fred Noble, N5JIK

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WB4YTX

at the Fairview Vo-Tech school.

Plans are still tentative, but if CARA follows the usual pattern exams will start Sat. morning at 10:00 a.m. and walk-ins will be accepted.

Members present at the Feb. 11th meeting were: President Ray Barnes AB5Z, Alvin Adams N5KQU, Terry McColl KA5TVF, Bob Haigler N5KNK, Steve Schoonmaker KF5SW, Denny Painton WK5V, Leo Peil W25H, Vern Brewer KA5SZD, Dede Bailey N5FUN, Ruth Simpson WX5Y, Betty Day KA5RTW, Olive Adams N5IXN, Nadine Painton N5FMH, and Jack Day NN5Z.

Ed Arnote W25F, our net mgr., wishes to thank Harry Watts KC5OU for his good service as net control for the month of January. Brad Bailey N5JEL is out net control stn for February and Jack Day NN5Z is appointee for the month of March. Net time is 8:00 local time, each Thursday except the second Thursday of the month which is our CARA meeting night. Repeater frequency is 145.45 dwn six.

CARA's next meeting will be held at Ruths Playhouse, 827 S. 13th St., March 10th. Be there or be square! 73's, NN5Z

MORE ZEDD

schedule. If she don't get that beam up there in the next two hours, I'm afraid she'll be doing the laundry long after midnight."

That was a terrible thought - that A5A might not have enough clean underwear and socks.

"What kind of antennas are you putting back up?" we asked.

Zedd yawned. "I'll have to tell you about my new antenna designs another day, boy. Right now it's time for my nap."

And he trudged back toward the ranch house, noble soul that he is, stoic in the face of mother nature's adversities. I mean, how great can one man be?

- KU5B

SUN	MON	TUE	WED	THU	FRI	SAT
SCARS NOVICE CLASSES MONDAYS MARCH 14 THRU MAY 2		1	2	AERONAUTICAL TRI-CITY 3	4	5
GREAT PLAINS 6	7	CIMARRON CIDAR OU 76'ers ARES 8	9	ALTUS AREA OKC/PH 10	11	SCARS 12
WHEATSTRAW 13	EDMOND CLUB 14	AUTOPATCH 15	16	KAY 17	18	VHF LUNCHEON 19 "THE BRICKS"
EARS 20	VE EXAMS RED CROSS 6:00 PM 21	CORA MAKE IT 22	23	24	EDIT NIGHT for C & E 25	26
27	28	29	30	31	MARCH	

Q. R. Zedd

ZEDD HAD ICE PROBLEMS TOO

That sound of distant thunder you may have heard in early January could have been real thunder as some of the ice and snow storms went through. But if it sounded like it was just a hoot and a holler south of town, it might have been two tons of aluminum coming down at Honor Roll Ranch.

Honor Roll, for the uninitiated, is the home of Q.R. Zedd, A5A, the world's greatest DXer, inventor of radar and the plastic milk carton, holder of our only 1x1 call sign, only member of the WAS (Worked All Stations) club with the 2-meter simplex endorsement, and all-around inspiration to us all.

We just suspected that the great man might be having problems when we turned on the rig that night and he was only 80 db over 9. He was racking right along on 20-meter CW, working stations split - Europe and Africa on one frequency with his left hand and Asia and the Pacific on another frequency with his right hand, listening to return calls on one VFO while transmitting with the other on his other frequency and memorizing everything to write down in the logbook later.

Zedd didn't say anything about antenna problems in the parts of his transmissions that we could copy, but we start missing a lot at about the 50 WPM level, and he was cruising comfortably at about 82, probably blowing chips on code-reader

computers around the globe.

Still, the signal *was* very modest for a man of Zedd's ability, so the next day we saddled a yak and headed south out of town across the tundra.

What a sight it was when we approached Honor Roll Ranch!

The sun was trying to break through, and here and there some rays slanted through glassed-over broken trees and holihoeks to reveal Zedd's array of towers standing - *empty*!

As we got closer, we saw that the earth, extending for miles around the sprawling ranch house, shone with a color different from that of the ice-encrusted trees and snowbanks. Then we figured it out. The ground was covered to a depth of about two feet with busted antennas and coax.

It was a sight calculated to make a grown man cry. Gone was Zedd's 10-over-10 at 1,550 feet for 75 meter operation. Gone were the phased 1,000-foot verticals, all eight of them. Gone was the 20-meter array, all 44 elements, along with the 15-meter stack, the 16-element 10-meter quad, the 300-foot backup multi-bander, both 6-meter howitzers, and the 160-meter beam with a railroad roundhouse drive motor mechanism.

All of it!

The storm had devastated Q. R. Zedd.

"This storm really devastated my stuff," said the great man himself, trudging out to meet us beside a snowdrift encapsulating more broken aluminum. "This is really sad."

"How did you operate last night?" we asked.

"I slung a piece out of my noodle soup over the back of a chair and loaded it through a super-tuner of my own design," Zedd replied. "It

worked real good, except Tondelayo had to keep coming in and pouring more broth on the noodle because it didn't load worth a flip when it dried out."

The great one paused thoughtfully, remembering. "Durn thing wouldn't stay on the back of the chair once it got hard from drying out, either. Every time it fell, the alligator clips came off."

We asked if anyone was hurt when the aluminum started to fall.

"Almost," Zedd replied. "Homer was outside someplace and my 28-element fell right on top of him. No problem, though. He didn't get hurt."

"But," we gasped, "how was that possible?"

Zedd fired up his oom-Paul. "Stuff fell on his head."

Did Zedd plan to start restoring the antenna farm right away?

He pointed skyward. "Already working on it. See?"

We peered painfully up into cloud glare. There on the 3,000-footer, just below the level of the clouds, we made out a tiny figure, belted in, cranking an end wrench on the boom fitting of a gleaming new 13-element beam.

Even at such a distance, and shivering badly, the figure looked darling. Which made identification easy.

"Tondelayo?" we asked.

"Yep," Zedd said. "But I'm sure worried about her."

"Because of the altitude?"

"Because of the time."

"The time?"

Zedd looked at his special hf monitor quartz crystal chronometer. "She's running way behind the work

SEE PREVIOUS PAGE