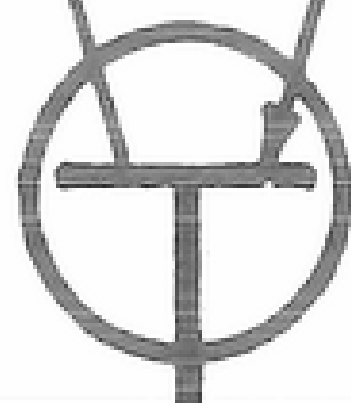


Central Oklahoma Radio Amateurs

COLLECTOR AND EMITTER

SINGLE COPY

25¢



AN INFORMATIVE MAGAZINE
PUBLISHED MONTHLY BY AND
FOR OKLAHOMA RADIO
AMATEURS

AND ANYONE INTERESTED IN
LEARNING ABOUT IT

JULY 1977

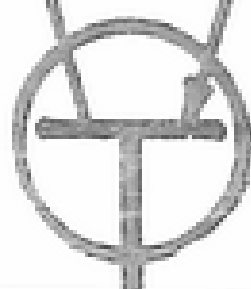
Vol. 3 No. 30



"A SIGN OF GOOD TIMES"

Central Oklahoma Radio Amateurs

COLLECTOR AND EMITTER



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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.

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PARTICIPATING CLUBS FOR CORA COLLECTOR & EMITTER:

AERONAUTICAL CENTER AMATEUR RADIO CLUB
Poatal Station 18, Okla City OK 73169
MEETS; 8:00 PM First Friday each month
Flight Standards Bldg, FAA Aero Center

Pres	Dave Langley	W4YDY	722-0462
Assist	Lloyd Kirk	WB5HUP	685-6566
V-P	Bill Hulse	W5NI	376-2125
Sec/Tr	Robert Runyon	W5JES	373-1818

MID-OKLAHOMA REPEATOR
MEETS: 8:00 PM Tuesday, first full week in month. Okla City EOC, 4600 N Eastern

Pres	Chet Hazelwood	W5GDL	427-1439
V-P	John Huckaby	K5QDR	672-4706
Sec/Tr	Richard Zanni	WB6FYL	691-1809
Dues: Sid Gerber, 829 E Bouse, MWC, 73110			

OKLAHOMA UNIVERSITY AMATEUR RADIO CLUB
202 W Boyd, Room 219, Norman OK 73069
MEETS: 7:30 PM Alternate Tuesday STUDENT UNION Room 161

Pres	Kim Elmore	WB5CLC	325-6717
V-P	Kenny Hutchison	WB5RXZ	364-3001
Sec	James Jones	WB5RKQ	
Treas	Mike Salem	WA5EPK	321-5453

BICENTENNIAL AMATEUR RADIO CLUB
MEETS: 3rd Tuesday each month 7:00 PM
AIR National Guard, Will Rogers Airport

Pres	Ken Newberry	WB5PYN	685-2717
V-P	John Oltmans	WB5PZG	525-6066
Sec	Jim Townsend	WB5VCB	632-5445
Treas	C Y Chandler	WB5TKG	232-9005

OKLAHOMA CENTRAL AMATEUR RADIO CLUB
323 NW 10th, Okla City OK 73103
MEETS: 8:00 PM third Friday each month
American Red Cross Bldg, 10th & Hudson

Pres	T. Van Woody	W5FMX	942-2831
V-p	Ken Ford	WB5KHU	528-8770
Sec	Joe Buswell	WA5TRS	732-0676
Treas	Ellard Foster	W5KE	789-6702

OKLAHOMA CITY AUTOPATCH ASSOCIATION
MEETS: 7:30 PM 3rd Tuesday, Bi-Monthly
Oklahoma Military Academy 36th & Grand

Pres	Gary McCormick	WA5ETV	946-2898
V-P	Guy Liebman	K5GL	787-9547
Sec/Tr	Jim Denman	WB5EOL	681-6048
7705 S Charlotte Dr OKC 73159			

CENTRAL OKLAHOMA RADIO AMATEURS,
MEETS: 7:30 PM , fourth Friday.
Red Cross Bldg., 10th & Hudson.
Come to the alley entrance.

ALTUS HAM CLUB
MEETS 7:30 PM, 2nd Thursday,
North Main Fire Station (CD)

Pres	Loren Simms	WA5CBF
Sec/Tr	Deanna McEndree	WB5UMH





A L T U S
H A M
C L U B

President: Loren Simms, WA5CBF
Sec./Tres: Deanna McEndree
WB5UMH

We appreciate the opportunity to become associated with Central Oklahoma Radio Amateurs. We hope this bond between our organizations will provide an interchange of information and ideas. I encourage clubs from all over the state to join in this effort.

I am enclosing the minutes from our last club meeting as well as a brief history of our club and our association with the repeater.

73's

Loren Simms, WA5CBF
President, Altus Ham Club

In June 1973 eight amateurs met and formed the Altus Ham Club. 42 Hams are currently members. The club is affiliated with the American Radio Relay League. The club meets the second Thursday of every month at 1930 hours in the Civil Defence Emergency Operations Center located in the basement of the North Main Fire Station. The current President is Loren Simms, WA5CBF. The current Secretary/Treasurer is Deanna McEndree, WB5UMH. The purpose of our organization is to promote amateur radio and to provide communications during emergency situations. The club sponsors a Hamfest and Swap meet at Lake Altus during the month of September, and they also sponsor Amateur Radio Classes at Western Oklahoma State College during the Fall of the year. 20 new Novices graduated into Ham radio this last fall. The Ham Club is heavily involved with the Weather Watch Program of Jackson County Civil Defense.

Although most of the members of the Altus Ham Club are also members of Southwestern Oklahoma Repeater Association (S.O.R.A.) they are two completely separate organizations. S.O.R.A., Inc. was formed for the express purpose of constructing and operating a high level 2 meter FM repeater. The site is Wilson's Mountain (height 887 feet above average terrain) located 10 miles East and 4 miles North of Altus. The President of the Association is Dwight Dennis, WB5KRH. The Secretary/Treasurer is Loren Simms, WA5CBF. The repeater has the call of WR5ANX. Trustee is Loren Simms. It operates on the frequency of 146.19 - 146.79 MHz. The machine uses a single antenna from Phelps-Dodge as an omi-directional transmitting and receiving system. The Super-Station Master antenna is placed on a 20 foot tower. The six cavity Phelps-Dodge duplexers are in-line between the antenna and the repeater. The repeater is a General Electric commercial repeater made especially for S.O.R.A. It was especially designed and constructed for 100 watts continuous duty cycle. The new repeater and controls are housed in a special insulated 6 x 6 x 6 foot Butler Building. It is fully weather proof and insulated on 6 sides.

There is a double insulated wood and tile floor. The G.E. repeater is a MASTR II fully solid state. The system is automatically switchable to two 100 amp hour truck batteries in case of power failure. A tone burst is injected when transmitting from the reserve batteries to indicate limited use. 20 separate control functions are built into the UHF linked control circuitry. Total cost for this system was \$5843.00. S.O.R.A. is also heavily involved in the Jackson County Civil Defence Weather Watch Program.

The Ham Club met 9 June 77 at 1930 hrs. at the North Main Fire Station. Loren, WA5CBF, called the meeting to order. The minutes and Treasury report were read by Deanna, WB5UMH, and approved. 26 people were present. Deanna gave a report on C.O.R.A. We sent in applications for 41 people. Dwight, WB5KRH, read a letter received from Leonard Hollar, introducing the new Section Emergency Coordinator, H. O. Townsend, WA5MLT, to the club.

The Tipton, Okla. Chief of Police, Dean Stinley, was introduced to the club. Mr. Stinley read a letter from the Mayor of Tipton, Clyde A. Ventris, expressing his thanks to the radio amateurs for their help during the Tipton tornado on May 20, 1977. He complimented the Altus Ham Club and The Altus E.O.C. personnel for all their efforts and the many hours spent in Tipton on guard duty and handling radio communications. He also thanked Ricky, WB5SSS, for driving the Hollis ambulance to Tipton. Richard, WB5PUF, Gary, WB5TUB and Rick, WB5VUL, did an excellent job as net control operators. Slides of the damage to Tipton were shown. These slides were taken by Cal, W5ZUS, on the ground and in the air from his plane. The air shots showed the distinct track of the tornado. Jerry, WB5LTU, showed photographs taken by A.A.F.B. Richard, WB5PUF thanked Tipton for their co-operation with the amateurs. Generators from Altus and Eldorado were loaned to Tipton until electricity was restored. 4th Mob. at A.A.F.B. had generators standing by if needed. It was brought to the club's attention that since 4th Mob. is no longer in Altus, we now have only 2 generators available for emergency use. Oliver, WA5OGC, suggested we check into the MARS generators that can be allotted to individuals. Butch, WA5WIC, reported he has a generator that needs to be made portable. Everyone agreed that while we learned a lot in the face of disaster, we need to improve. Loren suggested that anyone having equipment such as revolving lights, generators, etc. that could be used in an emergency, make a list of what you can loan and give the list to Dwight, WB5KRH. Dwight played tapes of the Eric and Tipton tornados. The Altus E.O.C. tapes its weather watches.

We broke for refreshments. Thanks to Shirley Stevenson and Susan Moore for this months eats. Next months volunteer is Janice Bryan.

A motion to adjourn was made by Cal, W5ZUS, seconded by Jerry, WB5LTU. Motion carried. Next meeting 14 July 77.

Dues paid by Chuck Nichols, WD5BBN, Don Hayes, WB5NRQ, and Ricky Walkup, WB5SSS.

Larry Moore, WD5BBP, 362-B Ash, Altus, Okla. 73521 needs a schematic for a Heathkit DX-35. If you have one available for copy, please contact him.

73's

Deanna, WB5UMH

I wish to thank Joe Harding for the help, information and supplies he has sent to me. All the instructions and examples have made it easier for me to compile the reports for C.O.R.A. I know the club is going to enjoy Collector and Emitter. See you next month.

Deanna, WB5UMH

Mid-Oklahoma Repeater Inc.

A NON PROFIT ORGANIZATION
OF RADIO AMATEURS DEDICATED TO PUBLIC SERVICE

MORI BUSINESS

JULY MORI MEETING will be at a new location: the Oklahoma Military Academy, 3501 N. E. Military Circle, July 5, at 8 PM. The move is necessitated by an increase in attendance recently. The Academy is about a block south of N. E. 36th and Grand. Go south on Grand. Grand is about mid-way between I-35 and North Eastern.

NO AUGUST MORI MEETING; Ham Holiday instead.

PRESIDENT CHET HAZELWOOD, W5GDL is in the hospital at Lackland AFB, San Antonio for an operation. He expects to be back in OKC in time to attend the July meeting. We all wish Chet a speedy recovery.

SLOW SCAN television demonstration by Abe, WB5AUF for July meeting!!!!

MINUTES OF THE JUNE 1977 MEETING

June 7. The meeting was called to order at 8:00 PM by Pres. Chet, W5GDL. Introductions followed. Then we had a current report on the repeater status's by Ron, WA5EAI - 34/94 & Ken, K5VVZ - 07/67. Everything was reported in good working condition. The CORA report was given by Fred, K5HFN & he reported that everything is going good for the HAM HOLIDAY in August. Ellard, W5KE reported that the preregistration prize will be a Rohn Tower & the grand prize will be a 80 - 10 meter Xcvr. Robby, W5JES invited everybody out to the ACARC field day but said they were not going to compete in the contest, but added that anybody who wanted to compete should join the 76'ers since they will be competing. The program followed. Joe Hylton from Norman gave an excellent presentation on solar energy & heating systems which was enjoyed by all.

Following the program a few more items of business were taken care of. The Treasurer's Report was given & we had a balance of \$1,480.53.

Also Don Graham, WA5TAW was appointed to the executive committee to replace Mac, K2GKK who will be leaving shortly to his assignment in Iceland. The motion was made by Mac, K2GKK & seconded by Frank, W5PDH. And the vote was unanimous. Volunteers for addressing preregistration envelopes for CORA were solicited & Bob, WA5CJG & Marvin, K5HQP spoke up.

Meeting was adjourned at 10 PM for coffee & doughnuts & a big BULL session. There were 74 members & guests present.

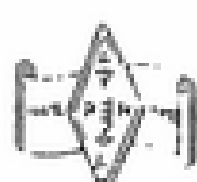
+ + + + + Rich, WB6FYL, Sec/Treas.

P.S. I was really glad to see the turnout at our recent club meeting & would like to thank everybody for attending & hope that we can maintain such a good attendance record at our future meetings & of course we'll try and get a monthly program that is of interest to the vast majority & if anybody has any ideas for a program feel free to call me at home (691-1809) or on the air (WB6FYL).

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From The Investor, Spring - Summer 1977:

"MONKEY BUSINESS One small business that is breaking even - the Chimpanzee Department of the Portland, Oregon zoo. Six chimps have been doing watercolors which the zoo sells for \$5 and \$10 apiece. In a recent 12-month period, the paintings brought in over \$3,000 - enough to pay for the zoo's Chimpanzee Enrichment Program, designed to provide a more favorable environment for the chimps. Three of the chimps are switching to acrylics on canvas. The new masterpieces will go for \$25 each."



W5PAA

YAKKEY-DEE-YAK FROM THE PRESIDENT

As most of you are reading this, Field Day will be over. Hopefully, everyone that participated had a grand time and good weather. The ACARC Field Day was led by W5JES and W5NTL. Robbie said he had about given up winning, but they planned to have more fun than anyone else!

Ham Holiday is closer than you think. I'm sure there is some more work to be done. If the same holds true here, there should be a record breaking crowd for a hamfest in Oklahoma City. Attendance at many hamfests in the last couple of years have increased from 100 to 500%!!! The increase in new amateur licenses have helped this very much.

The July program will be presented by Ellard, W5KE. He will talk about voltage regulating AC transformers. Thanks to Russ Gibson, for his fine presentation on minicomputers at the June meeting. There was much interest and discussion about computers and their use in amateur radio. Russ went to the computer convention in Dallas later in June and came back with some good information on new developments. One was a complete home system ready to go for \$600. That included the computer, keyboard, tape deck, TV readout and 18k of memory! Just think of things to come in the future.

Dave, W4YDY/K5NC

* * * * *

MINUTES OF THE JUNE 1977 MEETING:

President Dave K5NC called the meeting to order at 2001 hours with 68 members and guests in attendance.

OLD BUSINESS: Fred, K5HFN reported the CORA will not now sponsor the bumper sticker project, and that it is now a dead issue. A motion was made and seconded that the ACARC withdrew our commitment. Bill, K5KDR rendered the CORA report as follows: A contact has been made, or will be made with the Oklahoma Tourism Bureau about the possibility of getting some cooperation from them for QSL cards boosting the State. A new CORA rooster will be out after Ham Holiday. There will be a campout at Lake Overholtzer Sat. & Sun. June 11-12 under the sponsorship of Bob, W5HXL. Other clubs around the state are joining up with CORA, the Altus club is the latest addition. There will be bluegrass entertainment at Ham Holiday. Bill and Dave have recruited six (6) bodies to help with the special edition of Collector and Emitter for C&E. Thursday evening June 23, and the Red Cross. George, W5NTL, reported he will not be here for Field Day this year having scheduled leave for the event. Robby will carry on. Robby reports he will set up out at the Overholtzer site and await help.

NEW BUSINESS: In a short ceremony, Leonard WA5FSN passed on the SEC job into the very capable hands of H.O. Townsend WB5MLT. H.O. promised to do his best to advance the image of the hobby throughout the state. Congratulations H.O., we know you will carry on the fine tradition in the position that Leonard has very capably handled. And, Thanks to Leonard for a very fine job.



Ivan, W5HUFU reported on the advertisement situation with C&E. July 17 will mark the Beaver, Oklahoma Hamfest...registration is free, and there will be a picnic lunch. BYOB. (Basket, that is!!) PROGRAM: A very interesting program was presented by Russ Gibson, who operates a local computer store Bit & Bytes. The demonstration of the computer capabilities were most interesting. Thanks Russ. Meeting was moved closed, seconded and carried at 2130 hours for coffee & donuts.

Robby, W5JES

* * * * *

TECHNICAL REVIEW -W5JJ-

RADIO COMMUNICATION HANDBOOK, Vo.2, 5th edition. The second half of the RSGB handbook lives up to the high standard set by the first volume. Its chapters on propagation and HF antennas alone are worth the price of the book. And that price is not cheap !!!! Titles of the other chapters give one an idea of what's covered in this volume. They are : VHF and UHF Antennas, Mobile and Portable Equipment, Noise, Power Supplies, Interference, Measurements, Operating Technique and Station Layout, Amateur Satellite Communication, Image Communication, plus two more of interest only to amateurs in the United Kingdom. This is not a handbook to replace the one published by the ARRL. Instead, it's one to present a somewhat different approach to matters of theory and technique. It's a handbook worthy of being on your bookshelf!!

** ** *

A REMARKABLE NEW RECEIVER

It's not often a new receiver, at least one worthy of note, appears upon the market. The Yaesu FRG-7 was the last one to crack the USA advertising pages. McKay Dymek Company has announced its DR22, selling at \$995.00, which places it somewhere between the cost of the really professional ones and the just-pretty-dang-good ones.

On paper (and at \$995 it'll remain "just on paper" in as far as this writer is concerned) it reads like a honey! Digital readout, fully synthesized, solid-state, phase-locked, no dial thus no backlash or other tuning error, continuous coverage from 50 kHz through 29,700 kHz in 5-KHz steps with variable tuning in between steps, two degrees of overall selectivity (4kHz and 8kHz), and with crystal filters in the first and second IFs but with a ceramic filter in the third IF (the only apparent Mickey Mouse factor).

How does that strike you? As an amateur of radio, you'd probably desire a crystal or mechanical filter in that third IF stage so you could have decent selectivity on SSB.

The distributors apparently recognize that the price tag is going to discourage many prospective users; so they offer a "rent/own" plan. Maybe that's like the "lease/purchase" plan widely used by government agencies.

If you'd like more info, call the distributor, toll free, on 800-854-7769. Or write them at 675 N. Park Ave., P.O. Box 2100, Pomona, CA 91766.

W5JJ



CHATTER

Bill Huffman has joined the ranks of those having two-letter calls. He's N5CC. Like several others, Bill has held an Extra Class license every since it became available but just recently elected to swap his old call for a new one.

WHAT'S AN AMATEUR??

Having married amateur radio, along with me, some 40 years ago, my YF has heard a lot of yak-yak coming out of a speaker attached to a communications receiver. Some of it gives her the "willies".

Just recently I had the Drake TR-4C on the phone section of 40m. A certain W8, who regularly hangs out on around 7275 kHz, was spouting his usual line. I suspect he has it taped and merely puts on a cassette and lets it roll for his 20 minute fulmination. The text of his harangue is "The Horrors of Incentive Licensing." He boasts of how long he's been licensed, how he'd never taken the Advanced, how he could have had a two-letter call but turned it down, etc., etc..

It was a witty and apropos remark by my YF about the W8's spiel that set me thinking: Just what is an amateur?

Lets consider an amateur of golf. He buys golf clubs, etc., but what he constantly and consistently strives to do is to improve his ability to get around those 18 holes in a minimum of strokes. In short, his excellence, his mastery of his art, his standing in the golf "community" is reckoned in the smallness of his score. Its not the expense of his clubs, the fineness of his clothes, the size of his golf cart. Its his score, naught else.

Now lets consider an amateur of radio. Is it the expense of his transmitter and receiver that says whether he's a true amateur? Any punk with money can buy its equal!! Is it the height of his antenna or the number of elements in the beam perched thereon that determines his status? Again, any punk with more money can top him. What, then, ranks him, what is the equivalent of the golfers score? Just one thing: The type of Radio Operator License issued to him by the FCC!!

To say that a true amateur never strives with all his might to rise to the top is sheer nonsense. Maybe the piddler, the fiddler, the diddler may not. But the amateur, the true lover of the sport, art, science, or what-have-you, always strives to excell, to reach the top rung of whatever ladder presents itself for demonstrating his ability relative to that of others in his field. And with the amateur of radio, its the class of Radio Operator License that speaks his ranking relative to others. Thats something the punk with money can't buy!!!

Now back to our hypothetical amateur of golf. Would he boast, after 35 years of golfing of requiring 40 strokes over par to make those 18 holes? Would he boast of knocking out a half-bushel of grass every time he made a swing at a golf ball? Oh, he might kid a bit about his alleged lack of ability, but he'd never boast about it. Nor would he agitate for a change in the rules of golf that would permit him to pick up a golf ball and carry it over to the next hole and drop it into the hole so he could always make a



"hole in one" with no effort. Compare this with some of our more vocal "amateurs" of radio!!

The amateur of radio is fortunate in that its only his innate ability that limits how far he may progress towards the ultimate pinnacle. Its not his worldly goods; the most impecunious amateur can reach the top as readily as the most wealthy. Its only his inner drive, his determination, his willingness to devote effort to achieve a goal.

And thats what marks an AMATEUR.

-W5JJ-

THE JACK ANDERSON QUIZ SHOW

On 14 June, at 2100 hours CDT, radio station KMOX, at St. Louis, operating on 1120 kHz, broadcast a show featuring Jack Anderson responding to 'phoned-in questions regarding his infamous condemnation of amateur radio. Of course, he called it "ham" radio, as do all who want to denigrate amateur radio.

Having heard some amateurs talking about the on-coming show (while edly tuning around on 14 MHz), I fired up the Yaesu FRG-7 and listened. I wish I hadn't!!!

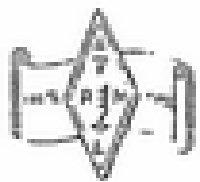
Anderson pussy-footed around, as to be expected. He claimed he hadn't written the article, admitted he hadn't read any of the quote "thousands" unquote letters he'd received on the subject, said an assistant had prepared the article based upon input from a Congressman from Georgia, and maintained his assistant was correct on every item. He claimed he couldn't answer questions because he "wasn't a technical man and the amateurs were basing their contentions on technical grounds."

Several amateurs called him, including Wayne Green, who called from Dallas, TX. Not a damned one nailed Anderson on the obviously weak portions of the article. Not a one called his hand on the matter of the FCC following international treaty obligations, obilgations which provide for amateur frequency assignments but do not spell out a thing for CB, except to lump it in on general Land Mobile assignments. He kept barking about "9,000,000 CBers and only 300,000 hams" and that "majority should rule."

Hell, if he wants majority to rule, why doesn't he advocate turning the CBers lose, unfettered, for operation on the 550kHz to 1550-kHz, 88-MHz to 108-MHz, 55-MHz to 72-MHz, 77-MHz to 88-MHz, 175-MHz to 216-MHz, 472-MHz to 890-MHz portions of the frequency spectrum, where only a tiny handful of stations, minuscule compared with the 300,000 radio amateurs hold licenses????

After listening to the paltry arguments advanced against Anderson, I'm fully convinced only a few radio amateurs (and no hams) have even a slight comprehension of the basis for existence of the Amateur Radio Service !

W5JJ



W5 PAA

ROBBY'S SOAPBOX

The July issue of QST has a very thought provoking guest editorial on page 80 in the VHF department.

The editorial is by Bob Lucas WAØDXZ, and concerns something that has troubled me for a while about the differences in antenna polarizations at different ends of the 2 meter band. Since I'm so new to the "new" 2 meter band that my shoes still squeak, I'm not too well qualified to take a stand on the subject as WAØDXZ does in his article. However, I do have a new (used) pair of eleven element beams sitting out here in the yard, and a multi-mode rig to drive them with, and the delima of which polarization to use. I enjoy FM'ing as anyone listening to 34/94 can attest, and I also enjoy the SSB/CW aspects of the band. I'd like to engage in some of the repeater DX I hear, but don't want to give up the little jaunts into North Texas and Kansas I've recently been enjoying on SSB. So what to do?? One reason the tower isn't up yet is because of a serious doubt on my part as to which way to polarize. One day, I'm all for sticking them up; horizontal, the next vertical, and the next, I want to put one up vertical and one up horizontal... until I take a look at what that extra three db can mean to me by stacking. So I, for one can readily grasp what the editorial is getting at... I wonder is there anyone else in Collector & Emitter land with the same problem??

W3XO, who conducts the column for QST indicates he would like to hear some comment on the matter... I for one sure would... If you have an opinion one way or the other, how about letting me hear from you. I'll reproduce any letter bearing on the subject here in C&E, or better yet, how about getting on to QST... I for one think the subject is going to become a serious matter before too much longer as multi-mode stations begin to become more common on 2-meters. Comments anyone???

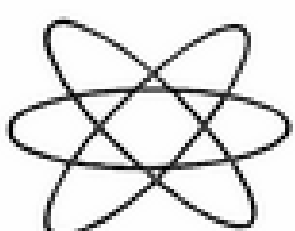
73

Robby W5JES

** ** ** ** **

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Leonard Gatewood invites you to his store while Amateurs and their families are attending the "HAM HOLIDAY" in Oklahoma City.

MOVE THAT C B RIG TO 10 METERS THE EASY WAY - -

There has been a lot of talk lately and a few magazine articles about converting old CB rigs to the 10 meter band. Two very good articles were in the May issue of 73 Magazine.

Several of us in the Oklahoma City area have either already converted one or have the crystals on order to do so.

Following is the list of channel frequencies we are using:

FOR AM RIGS

1	28.76
2	28.77
3	28.78
4	28.80
5	28.81
6	28.82
7	28.83
8	28.85
9	28.86
10	28.87
11	28.88
12	28.90
13	28.91
14	28.92
15	28.93
16	28.95
17	28.96
18	28.97
19	28.98
20	29.00
21	29.01
22	29.02
23	29.05

FOR SSB RIGS

1	28.56
2	28.57
3	28.58
4	28.60
5	28.61
6	28.62
7	28.63
8	28.65
9	28.66
10	28.67
11	28.68
12	28.70
13	28.71
14	28.72
15	28.73
16	28.75
17	28.76
18	28.77
19	28.78
20	28.80 "10-10 Club Fy"
21	28.81
22	28.82
23	28.83

This allows the SSB rigs to work the side band DX at the low end of the band, and gives them seven channels in common with the AM rigs

Ray Roton, WA5LWZ



NO!

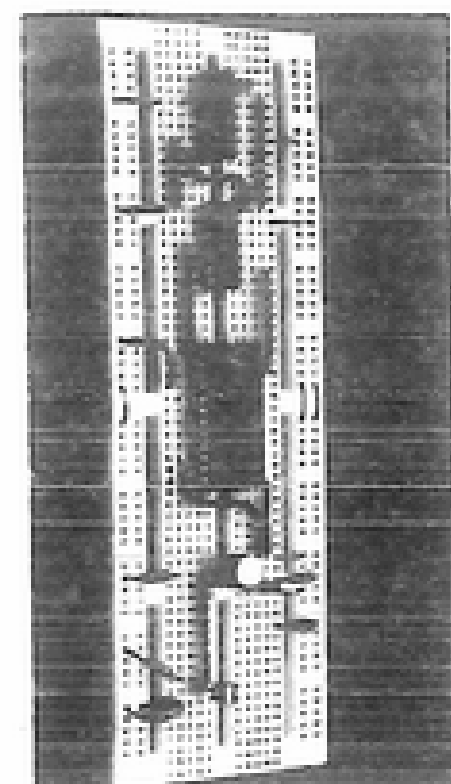
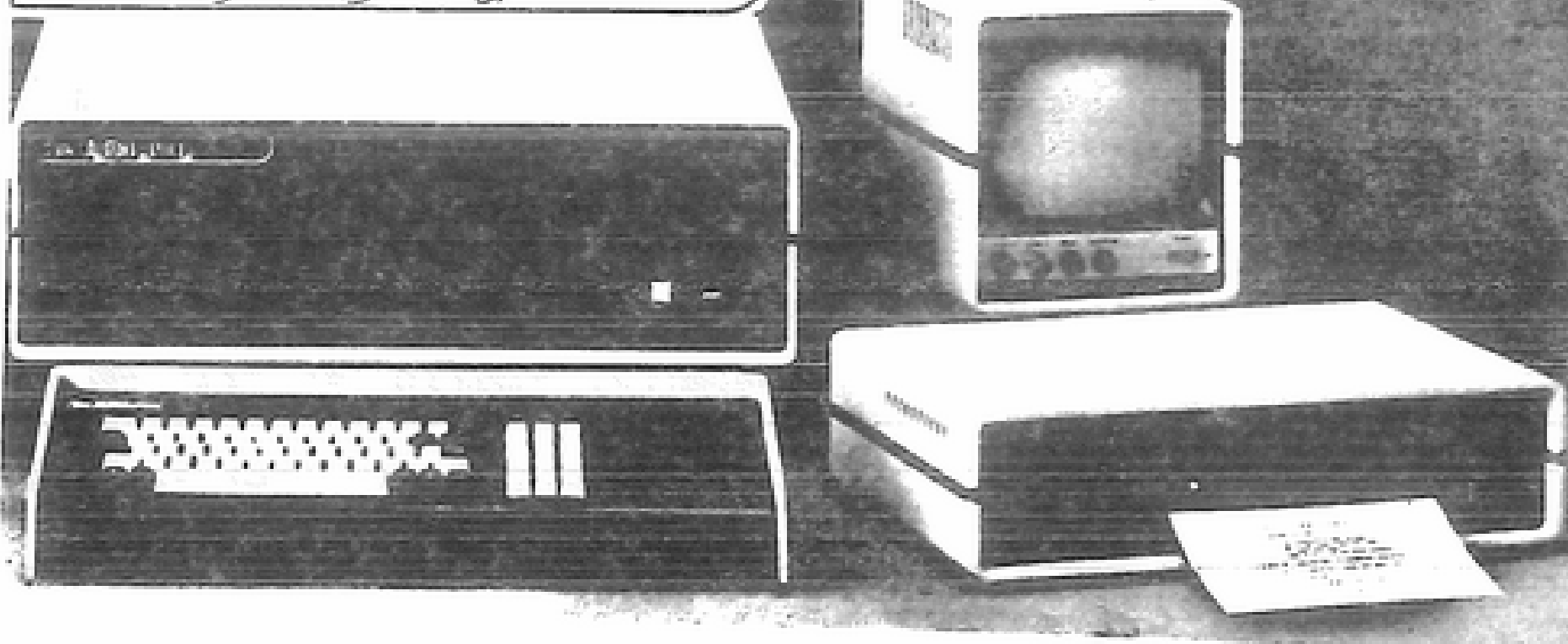
ELLARD'S EX EL WILL NOT BRING
ALL THESE TELETPEWRITERS TO
HAM HOLIDAY.

But there will be one or two
of them and lots of other
surplus goodies in Room 178
at Southgate Inn 6 & 7 August

See You There,

W5KE

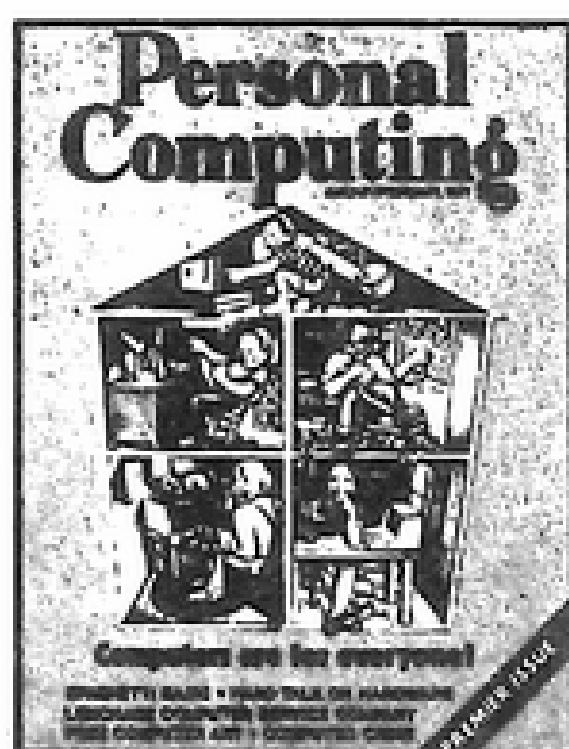
the digital group



INTERFACE Magazine

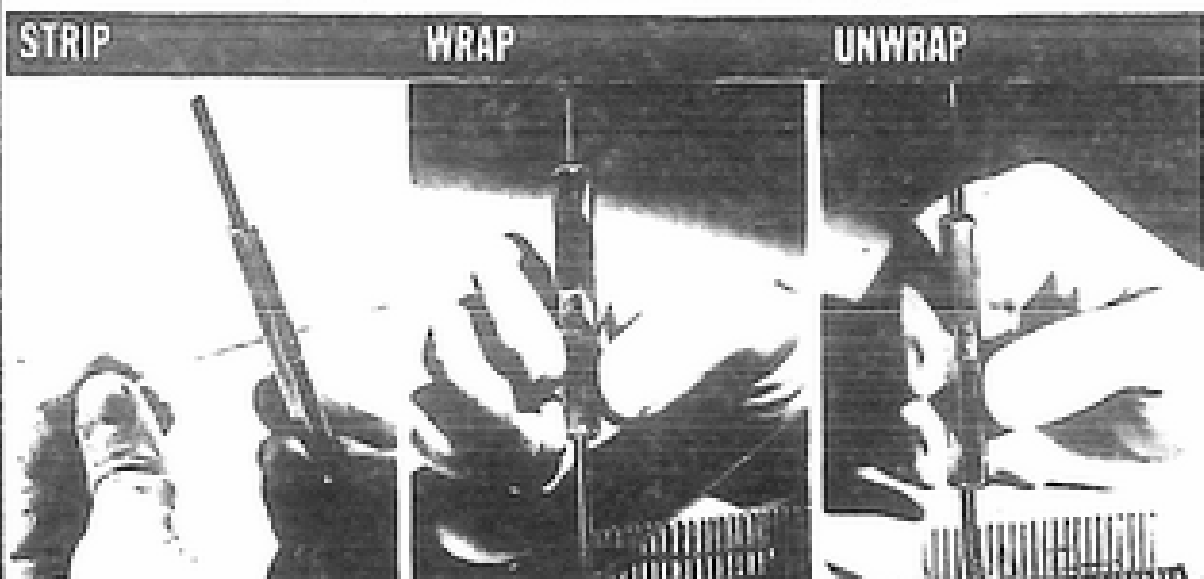
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BYTE



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Strips, Wraps and Unwraps 30 ga. wire on standard wire wrapping pins



Nothing is Faster and Easier than ACE for circuit breadboarding.

Used to be you'd get a circuit idea, lay out a pc board, print it, solder everything together, troubleshoot, change your layout, try a new board, and spend absolutely too much time breadboarding. Now A P ACE All Circuit Evaluators let you breadboard in a fraction of the time. Make your changes immediately. Keep full leads on your components. Avoid the heat damage possible with repeated soldering and desoldering. And have a pattern for your board—if you need a board—sitting in front of you. In about as long as it takes to sketch a schematic. Get cooking with ACE. ACE. The All Circuit Evaluator from A P Products.



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Troubleshooting DIP ICs can be a pain in the probe if you can't get at their pins. But you can make the job faster and easier with Super-Grip™ IC test clips from A P. Our "contact comb" design prevents shorting while our superior gold-plated phosphor bronze terminals make contact. Then your probe is welcome aboard its handy topside pins. And this gutsy little spring clip is perfect as an IC puller, too. So use it for its connections or use it for its pull. Either way, you're full speed ahead with A P.



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CORA Collector & Emitter

-13-

July 1977



THE BICENTENNIAL AMATEUR RADIO CLUB



Minutes of the Club meeting of June 21, 1977.

The meeting was called to order by Pres. Ken Newberry, WB5PYN, at 7:15 PM.

Ken Burdick, K5UAB, gave his report from C.O.R.A. Norman Radio Club is sponsoring a summer radio class. Contact Gordon, W5OV, # 329-6075 or John, W5AVK, # 321-8566 for information on the class.

Ken asked for vols. (K5JB - WB5TRS) contact for entertainment. Everyone should try to pre-enter & register for Ham Holiday for the sum of \$ 3.00. The grand prize is a TS520 and pre-registration prize is a 50' of Rhon Tower.

Ken asked for volunteers to help Thursday night to help get the Collector & Emitter together and mailed out. Eight volunteers said they would be there at the Red Cross at 7:30 PM Thursday Night.

Several people were asked to help for the Field Day.

Jim, WB5VCB, was selected for Power supply.

Donald, WB5VAP was selected for Transmitters, Rigs, etc.

Dick, WB5TMW, Was put in charge of tents, trailers, etc.

Ken Burdick, K5VAB, was put in charge of Logs & sheets.

Bill Tuck, K5EA, was put in charge of Operators.

Dee, , & O.J. WB5SRX, Were put in charge of Antennas & Co-ax.

Edie, WB5YHG, was put in charge of Posters.

Joe Ramadge, WN5TDW, in charge of Gasoline.

Mary Phillips & Judy Day will be in charge of Food.

Coy Day, N5OK, in charge of misc. equipment for water cans, etc.

Bob, , put in charge of clocks, lights, etc.

Ken, WB5PYN, in charge of Frequency, Bands and etc.

C.Y. WB5TKG, in charge of safety & clean-up department.

Heinz, WB5ZGP, in charge of Novice Operations.

Forrest, WD5EST, has given his permission to use his call for Novice.

Bill Tuck, K5EA, gave his permission to use his call for operation on other bands

Plans were made to start setting up on Friday evening.

Coy, N5OK, gave his report on the QSL Service. W71ZH address in call book.

Coy read a copy of a letter sent to the base Commander and Air National Guard Commander giving Ken Newberrys report to them in appreciation for their help and support of the facilities they are helping our Club with.

Jim Compton of the Explorers Club was introduced as a welcomed guest.

Membership cards & dues receipts which have not been picked up were made available to the members present.

The Club adjourned for coffee break at 8:05 PM.

Reconvened at 8:30 to continue with the meeting.

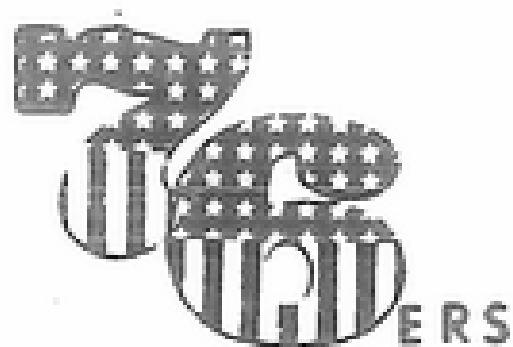
A Air National Guard film was shown and enjoyed by members who were present at their Club meeting. Both, the 76ers Radio Club and the C.A.P. unit enjoyed the film.

The Club meeting adjourned at 9:15 PM.

Jim, WB5VCB

Sent.

QCWA Meeting 24 July 1977 at Val Genes, 1801 Penn Sq. 01:00 P.M.
This is a regular quarterly meeting. Bring your XYL or YL.



THE BICENTENNIAL AMATEUR RADIO CLUB



FIELD DAY 1977

I want to take this opportunity to thank everyone that helped us with our Field Day operations. At this time, I have no figures on the number of contacts, but I believe we did very well.

As usual, we had the problems that no amount of planning can prevent. This year, weather was an important factor. For those who might have been sleeping, we narrowly missed a severe thunder storm Saturday night. The storm passed south and east of us. If it had passed over, I think we would have suffered much tent and equipment damage. We did get some rain that kept knocking the power off.

The bands were fairly good this year. The big surprise was the number of 6 meter activity on SSB. Looks like 6 may be the band to be operating now!

Many thanks to Bill, K5EA, and Heinz, WB5ZGP, for their calls we used. I hope they don't get any tickets!

Also, thanks to everyone who brought rigs, antennas, tents, trailers, food and drinks, and all misc. equipment.

And special thanks to all the people for their endurance while operating and the hard, hot work of setting up and tearing down, and the ladies for preparing food.

We were glad to have all visitors out and hope they enjoyed Field Day as much as we did. We will be looking for them again.

73

Ken, WB5PYN

LONG WIRE ANTENNAS

I started out using the 40 meter dipole on 15 meters. Using the Heathkit SB 102. Later I bought the Millen transmatch using it on the 40 meter dipole. It worked good. I was using it on all bands but was not getting too much DX. I was looking through the Antenna Book for a better antenna without spending much money. Well I found a good one. It was the long wire antenna. It said it was very good for DX and could do better than beam antennas. But it said it's not a long wire unless you used this formula. This formula works very good on your calculator.
 $4.7 \times .05 = 3.95$ $3.95 \times 492 = 1943.40$ $1943.40 \div 7.2 \text{ MC.} = 269.9$ Or 270 feet long.
Now this will work 10 through 40 meters.

So you see this takes a lot of space, but it's worth it. This long wire works very good for me on all bands, and with the transmatch too. I come in better than some others and I get a lot of DX. I have not had this long wire too long but here is the DX I received on it. Jamaica A3A; Mexico A3A; Hawaii A3A & CW; Alaska A3A; Puerto Rico A3A; Guatemala A3A; Bermuda Is. CW & A3A and Canada CW & A3A. Most of this was on 15 meters and some on 20 meters. So you see this works very good with the transmatch and the formula. It does not matter how long the ground is. My ground is only six inches long and the hot wire is 270 feet long by the formula.

So I am going to have Happy DXING this summer now that school is out.

HAPPY DXING and 73. Greg Peck WB5PNV

FOR SALE: Drake "4" line. Complete. T4Xb, R4B, and AC-4. WA5JES Smitty. El Reno 262-1250 or via the Calumet Repeater 146.01/61.

WR5ASI - - THE NEW REPEATER IN TOWN

ACTUALLY WR5ASI IS NOT NEW, BUT HAS BEEN OPERATIONAL CONTINUOUSLY SINCE IT WAS LICENSED IN DECEMBER OF 1976. THE REPEATER OPERATES ON 146.10/.70 AND UNTIL RECENTLY WAS OPERATED AT K3TGY, BILL BRODIE'S HOUSE IN MOORE, OKLAHOMA. AT THIS LOCATION THE RECEIVE ANTENNA WAS AT 70 FEET AND TRANSMIT AT 40 FEET. DESPITE THESE HEIGHT LIMITATIONS, IT WORKED QUITE WELL, ALBEIT THE FACT ITS COVERAGE WAS QUITE LIMITED.

ON JUNE 12, THE REPEATER WAS MOVED TO ITS SEMI-PERMANENT LOCATION IN SOUTHEAST OKLAHOMA CITY, RECEIVING AT 180 FEET AND TRANSMITTING AT 160 FEET. AFTER THE USUAL HEAD-SCRATCHING AND HAIR-PULLING, ALL THE PROBLEMS WERE SOLVED. (SQUELCH ADJUSTED TOO TIGHT AND A LOGIC LINE FROM THE CONTROL RECEIVER WHICH HADN'T BEEN HOOKED UP). ONCE THESE PROBLEMS WERE TAKEN CARE OF, THE REPEATER WORKED WITH FLYING COLORS. MOBILE COVERAGE THROUGHOUT OKLAHOMA CITY IS FAIRLY GOOD, ALTHOUGH A DESENSITIZATION PROBLEM EXISTS WITH THE CLOSE ANTENNA SPACING, WHICH WILL BE TAKEN CARE OF IN THE NEAR FUTURE.

THE EQUIPMENT USED IS G.E. PROGRESS LINE WITH A 60 WATT TRANSMITTER STRIP DECOUPLED SLIGHTLY SO AS TO RUN ONLY ABOUT 40 WATTS TO SAVE WEAR AND TEAR ON THE FINALS. THE CONTROL LOGIC, ID'ER, ETC. IS ALL HOMEBREW.

THE .10/.70 PAIR IS THE NATIONALLY RECOGNIZED REPEATER PAIR FOR RTTY (RADIOTELETYPE), AND WR5ASI ENCOURAGES RTTY OPERATION, ALTHOUGH VOICE IS ALSO REPEATED. RTTY OPERATION USES THE STANDARD 2125/2295 170HZ SHIFT AT 60 WPM. THREE STATIONS AT THE PRESENT ARE ACTIVELY MONITORING 24 HOURS A DAY ON RTTY AUTOSTART. (THIS IS WHERE THE RTTY TONES AUTOMATICALLY TURN YOUR TELETYPE ON AND COPIES ANY MESSAGE SENT THEN TURNS YOUR TELETYPE BACK OFF). ABOUT 4 OR 5 MORE STATIONS ARE IN VARIOUS STAGES OF GETTING ON RTTY, WITH SEVERAL OTHERS INTERESTED.

THERE ARE TWO FUTURE GOALS FOR WR5ASI:

- 1) THE RTTY GROUP IN DALLAS, TEXAS HAS EXPRESSED INTEREST IN LINKING THEIR .10/.70 MACHINE WITH OURS. SPACE ON A 500 FOOT TOWER IN THE ARBUCKLE MOUNTAIN AREA IS AVAILABLE FOR OUR USE FOR A LINK REPEATER. THIS LINK WILL RETRANSMIT RTTY ONLY EXCEPT UNDER EMERGENCY CONDITIONS.
- 2) AS SOON AS WE WRITE THE PROGRAM AND WORK OUT THE INTERFACE DETAILS, BILL BRODIE PLANS TO INTERFACE HIS DIGITAL GROUP SYSTEMS MICROCOMPUTER WITH THE REPEATER. RTTY USERS OF THE REPEATER WILL THEN HAVE THE CAPABILITY TO ACCESS AND USE THE COMPUTER IN A FASHION SIMILAR TO USING A TIME SHARING TERMINAL. THE COMPUTER MAY EVENTUALLY TAKE OVER MANY OF THE REPEATER'S AUTOMATIC CONTROL FUNCTIONS.

THESE TWO LONG RANGE GOALS MAY SEEM QUITE DISTANT AT THE PRESENT TIME, AND WE MAKE NO CLAIMS AS TO WHEN THEY WILL BE REALIZED, BUT THEY ARE DEFINITELY WITHIN THE REALM OF POSSIBILITY. AFTER ALL, A RTTY REPEATER WASN'T EVEN THOUGHT OF A YEAR AGO!

WE WOULD WELCOME ANYONE WHO IS INTERESTED IN RTTY TO CONTACT EITHER MYSELF, TOM TODD, WA5TSJ AT 685-3685, OR BILL BRODIE, K3TGY AT 794-0406. BOTH OF US STAY PRETTY BUSY, SO WE MAY BE HARD TO GET AHOLD OF AT TIMES. BOTH OF US ALSO MONITOR .10/.70. LET US HEAR FROM YOU.

73'S TOM TODD WA5TSJ/TRUSTEE WR5ASI

FOR SALE: Drake TR-3 transceiver with RV-3 remote VFO, homebrew AC and DC power supplies. Everything you need except mike and antenna \$375. SBE-144 2 mtr with xtals for 9 positions \$150. Tired of buying xtals? GLB synthesizer \$100. Wayne WA5AOB 732-1870

Cushcraft, Larson, Wilson, Newtronics Antennas
AMATEUR RADIO SERVICE

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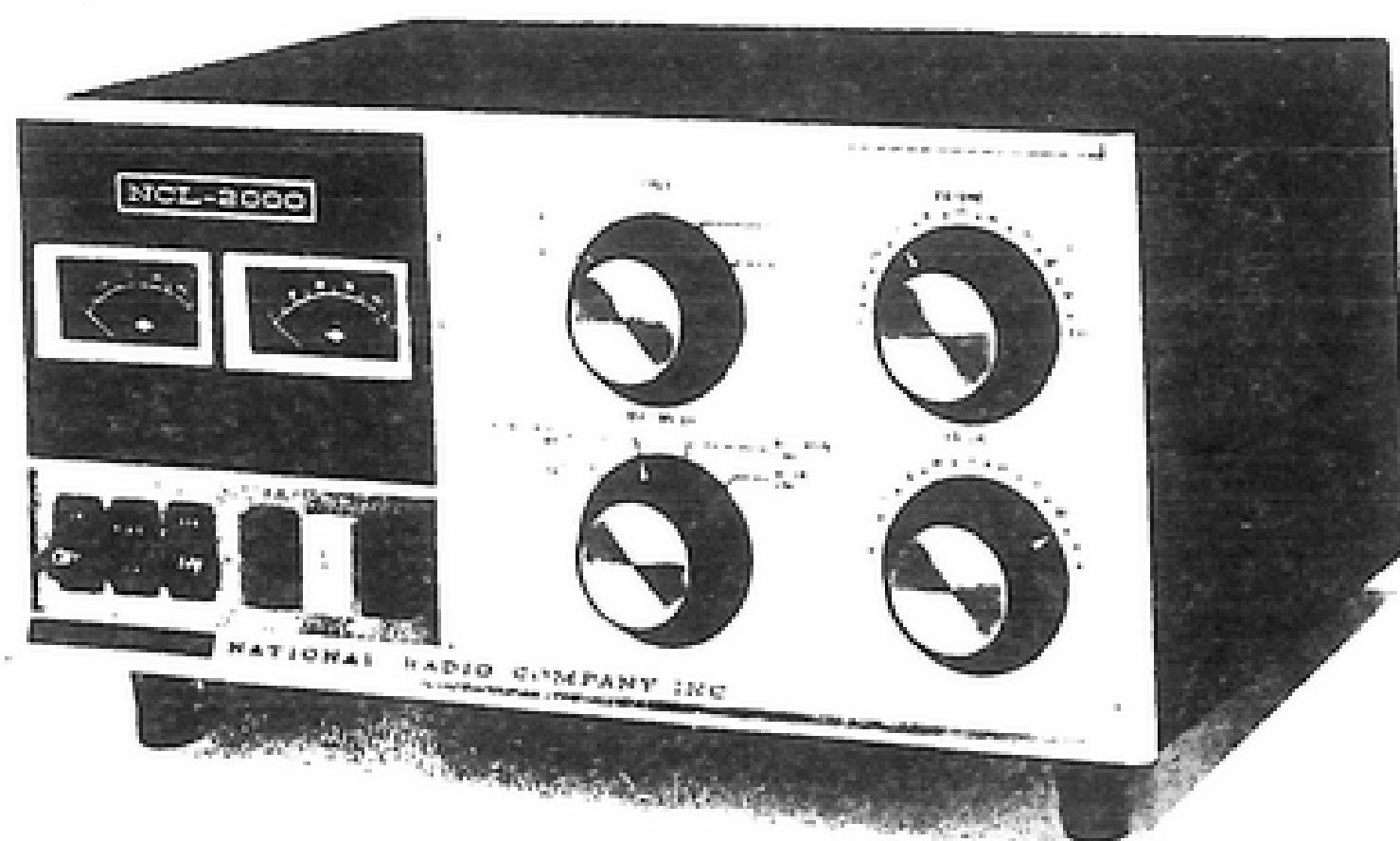
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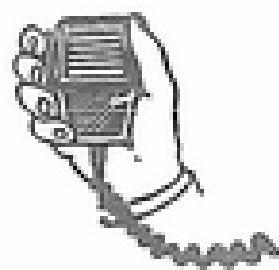
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Business Band



THE ZANY NEWS FREQUENCY

By JOE, WA5ZNF

WELCOME TO HAM HOLIDAY 77 - - - There will be a lot of you who will be receiving your first copy of CORA Collector & Emitter because we want everyone in Oklahoma and surrounding states to know about the big annual get-together and this is about the best way we can think of to invite you to come for the first time or return from other years. You still have time to pre-register (forms are on another page) and carry home the big, tall, pre-registration award, a tall, I can't remember just how tall, Rohn tower. And that's just the beginning. Details and a program outline are scattered about in this issue.

* * * * *

WHILE WE ARE WELCOMING, WELCOME TO THE ALTUS HAM CLUB - - - to full membership and partnership in CORA, Inc. After a little long distance communicating the forty-some-odd (the members aren't odd, just the number of them) members voted to go along with what CORA stands for and lend their support in promoting amateur radio not only in Central Oklahoma but as you can see in widely scattered areas. Now that they have led the way maybe other clubs in Oklahoma will see the benefits of pooling our efforts and incidently getting a good deal in publishing their monthly club paper. Can you print and mail a copy to each of your members for 15¢ a month? If clubs are interested just drop me a line and the whole story will be sent to you. Altus Ham Club has three pages of their own local news, etc. in this issue and of course can have more space if needed. I have been reading their publication for a while and it sounds like a going bunch and I hope to visit with them when my school sessions and the job slow down a little.

* * * * *

AS A TUNE UP FOR THE BIGGIE ON 6 & 7 AUGUST - - - You might make a run out to Beaver City for their Hamfest on Saturday July 19. It is a one day affair and there are no fees. Bring your own chow, a covered dish or two, etc. I don't have too many details but a bunch of swapping is sure to go on.

* * * * *

DO YOU HAVE A NEW CALL? HAVE YOU MOVED? - - - Next months Collector & Emitter will have a new, updated roster as a pull-out section. It will list Call, Name, Mail address and where known, telephone number, of every person who is on our mailing list, in other words, the real active or interested amateurs in the area. If you have received a new call, or just received your first call, moved, changed phone numbers or any other change you want listed you have until July 8 to get it to me by mail, see page two, or by phone. If you can't get me at home, 737-1044 try 737-5885 during the day and leave a message for me to call a specific number if I am not in.

* * * * *

NOVICE CAN RENEW THEIR LICENSE - - - And the first one that I have heard of doing so is one of the locals, WN5OHK, Al Bruning, out Choctaw way is now WB5OHK. Al likes that brass pounding and has been having so much fun traveling since he retired that he hasn't gotten around to upgrading, but that will follow.

* * * * *

SEE YOU AT SOUTHGATE INN, I-35 SOUTH IN OKLAHOMA CITY ON AUGUST 6 & 7!

TEAR ON THE DOTTED LINE, OR SEND THE WHOLE PAGE, TODAY

PRE-REGISTRATION FOR OKLAHOMA H A M H O L I D A Y
SOUTHGATE INN - OKLAHOMA CITY - 6 & 7 AUGUST 1977

NAME _____ Call _____ Lady _____

Street _____ City _____ State _____ Zip _____

Mail check (\$3.00 per person registered) to C O R A, Inc. P.O. Box 15013, Oklahoma City OK 73115
Letter must be postmarked NO LATER THAN 2 August to be eligible for the pre-registration award for which you are
eligible whether you are in attendance or not. Register as many people as you wish. Just list and enclose \$3 for
each.

FREE Fleamarket tables will be reserved by number. Non-Commercial only. RESERVE ME A FLEAMARKET TABLE. ☐

We will stay at Southgate Inn. Reserve (Single) (Double) for me. Dates _____ ☐

We expect to utilize the BUFFET Saturday evening. _____ ☐

We will make the BUFFET Sunday before the awards. _____ ☐

PLEASE INDICATE "PRE-REGISTRATION" ON OUTSIDE OF ENVELOPE

YOUR TICKETS WILL BE HELD AT THE RESERVATION DESK

ABOVE AND BEYOND

When business took me to San Francisco recently, it was natural for me to pack the Wilson hand-held with an eye towards some 2-meter work in the Bay area if time permitted. But, having heard some of those stories about jammers and other rude folk on two in California, I had mixed feelings when I announced I was monitoring WR6AFP at about 1940Z on May 31.

Back came W6VSQ, across the bay in Oakland, operating mobile from a park. He was pleased to achieve full quieting with one watt into the car-top whip, and had nice words about the signal I was getting out of a low floor of the downtown St. Francis hotel. Neither of us knew anything about the repeater location or anything else, and after a few minutes, that began to worry both of us.

The conversation went like this:

Me -- W6VSQ, this is WB5TZZ portable 6, for ID. Fine business, Tom but I begin to worry that we're monopolizing this repeater. What do you say we give it ten seconds of silence after my transmission, and then you can come back to me if no one inserts another call? Assuming that's OK, I'll turn it back to you, and after a pause of ten or so, go ahead then, please.

(Long silence)

Tom -- WB5TZZ portable 6, W5Victor Sugar Queen. I didn't hear anyone, Jack, but possibly it would be polite for us to QRT anyway. I worry about using somebody else's repeater too long, and I even have some difficulty with the one near my home QTH in Paradise (California) sometimes; it has a thirty second timer on it and I forget myself and keep timing it out. So thanks a lot, Jack, and I think I'd better be winding it down over here in Oakland. Go.

New call -- K6BLS.

Me -- K6BLS, WB5TZZ portable 6, go ahead please.

K6BLS -- I've been monitoring, gentlemen, and you don't need to worry about timing out here. The timer on this repeater is set for two minutes and forty seconds. And by all means feel free to continue as long as you want. That's what this machine is here for. K6BLS out.

Tom and I didn't continue too much longer, but the remaining conversation was more relaxed. I still don't know anything else about WR6AFP, but I do know that some of those stories about West Coast troubles on 2 meters must have been exaggerated.

Taught me a lesson, too. Next time I hear a stranger calling on the Norman repeater, I'm going to try even harder to give him a prompt and friendly reply...unless someone else does it first. It could make all the difference in the impression a guy gets about all the hams in an area...or even about the area itself.

* * * * *

Jack, WB5TZZ

PENN WIRELESS ASSOCIATION, INC. BOX 311, BRISTOL PA 19007

15 June 1977

Joe Harding, WA5ZNF
Collector & Emitter

Dear OM;

Your Field Day cover was too good to pass up - I had to copy it for X-MITTER - with sufficient credit, I hope. The significance was immediately apparent to me, and, so far, to everyone else who has seen it. Hope your local readers appreciate your work.

Would appreciate your running my regular "license plates wanted" commercial - I'm still looking for call plates from Okla (and everywhere else) - have managed only one since '70 from Okla - that from JJ.

Keep up the good work. I enjoy C&E, and, as you've noticed, have picked up many excellent items for X-MITTER

--- 73

Dave Heller, K3TX/W5NFJ

Ed: See if you can help Dave out .

* * * * *

A third-party agreement was signed Monday, May 16, by the governments of the United States and Jamaica. It became effective 12 June.

July 1977

-20-

CORA Collector & Emitter

TO PATCH OR NOT TO PATCH or "Patching up some Misinformation"

Several months ago in a recent issue of Ham Radio, Jim Fisk characterized one of the most misunderstood areas in amateur radio as SWR and Transmission Lines. To that I say "Amen" but also add that there is a lot of baloney barges (his expression) around with regard to another topic of great importance to the amateur community and that is "phone patching" and "autopatching."

In some instances, you can't blame a person who has his facts with less than perfect understanding. It seems logical to conclude that if you make a phone call across a telephone company tariff boundary, you owe them money. This is true if you are using their phone system, but it does not logically follow that making the same phone call via amateur radio where you use your radio equipment to cross that tariff boundary entitles the phone company to the same revenue.

The phone company does not have a monopoly on the transfer of information across their defined tariff barriers. When an amateur uses his federally given privileges to talk across that tariff boundary, there should be no doubt that this is entirely legitimate. The time that difficulty arises is at the point of interconnection where the amateur signal is coupled into the phone line. Prior to the Carterphone decision, the question of legality of phone patches was a grey area because of the phone companies insistence that they could protect their network by requiring all foreign attachments to have a protective device between them and the phone system. The question of long distance tariffs was not important, rather it was the interconnection and the fee for interconnection that focused the discussion.

Carterphone changed that. The phone company was found to be using its requirements for a coupler for protection as a method of stifling competition in the manufacture and sale of phone line attachments. The phone company did not use interconnecting protective devices for their own equipment (such as a Codaphone), but would require such devices for similiar equipment with identical specifications manufactured by other companies. Even QST published articles on phone patching after this decision declared the interconnection practice suspect and illegal. Long distance toll charges are not really relevant.

The Carterphone decision has evolved considerably since it was initially issued. The phone company has now embarked on a certification program for couplers and devices that can be installed on the system. The area is still subject to a considerable amount of litigation.

If autopatching is ever declared illegal on the amateur bands, it will not be because amateurs use them to talk across tariff barriers, but because of the nature of interconnection and the type of service that is provided. In addition, commercial use of autopatches will kill them quicker than anything. The nature of an autopatch is similiar to a Radio Common Carrier such as IMTS or Mobilphone. Is amateur operation of an autopatch a RCC? The answer is unknown. As a corollary, it might be suggested that an amateur derives a benefit every time he talks across a toll boundary. This argument dissolves into a puddle of silliness when you consider that whether there is a phone patch or autopatch at the other end, it makes no difference. Any amateur radio communications fits that definition.

Autopatches and phone patches are powerful and useful tools that benefit those who have the privileges of amateur radio operators. Use caution when exercising those privileges, but don't labor under unnecessary misconceptions.

Micheal Salem WA5EPK

HAM HOLIDAY



NOTICE: SPECIAL CORA MEETINGS

A SPECIAL MEETING OF CORA WILL BE HELD JULY 8 AT RED CROSS HQ'S - 7:30PM. PURPOSE IS TO REPORT HAM HOLIDAY COMMITTEE PROGRESS.

REGULAR JULY MEETING IS MOVED TO JULY 29 AT SOUTHGATE INN. DINNER (OPTIONAL) AT 6:30PM, MEETING 7:30PM.

CORRECT YOUR CALENDAR TO SHOW THE ABOVE DATES. DO IT NOW SO YOU DON'T FORGET. ALSO, GET OUT YOUR CHECKBOOK NOW AND WRITE THAT PREREGISTRATION CHECK AND GET IT IN THE MAIL - CORA, BOX 15013, OKLAHOMA CITY, OK 73115. THERE IS A FORM ELSEWHERE IN THIS ISSUE.

DON'T FORGET - DON'T FORGET

HAM HOLIDAY PROGRAM SCHEDULE

FRIDAY NITE, AUGUST 5
7 - 9PM, PREREGISTRATION

SATURDAY, AUGUST 6
9 - 9:50AM, OLZ MEETING (GIL, W5RB)
10 - 10:50AM, MOTOROLA HT220 EVOLUTION & NITTY GRITTY (COYLE SCHWAB, WA5DJG, MOTOROLA)
11 - 11:50AM, EMERGENCY PROGRAMS (ROBERT HALPRIN, KIXA, ARRL HQ)
12 - 1:30PM, LUNCH BREAK
1:30 - 2:20PM, MOBILE AND BASE VHF ANTENNAS (RICK PRINDLE, WB8WFH, MAYNARD AND GUNN)
2:30 - 3:20PM, MICROPROCESSORS/COMPUTERS, PART I (INTRODUCTION, DAVE BALLEW, K5WMY - HIGH LEVEL COMPUTER LANGUAGE, JOHN WALDVOGEL, W5UNA)
3:30 - 4:20PM, MICROPROCESSORS/COMPUTERS, PART II (DEMONSTRATION AND PANEL DISCUSSION, BILL BRODIE, K3TGY, DAVE, K5WMY AND JOHN, W5UNA)
8PM, PARTY - PRIZES - MUSIC BY UPTOWN BLUEGRASS

SUNDAY, AUGUST 7
7 - 8:50AM, QCWA BREAKFAST
9 - 9:50AM, ARRL FORUM (ROBERT HALPRIN, KIXA, ARRL HQ, JACK GANT, W5GM, WEST GULF DIRECTOR, ARRL, LEONARD HOLLAR, WA5FSN, SEC. OKLA. SECTION)
10 - 10:50AM, IMPROVED MOBILE TELEPHONE SERVICE (IMTS) DENNIS ORCUTT, WB5ISN, BELL TELEPHONE CO.
11 - 11:50AM, OKLAHOMA REPEATER SOCIETY MEETING
12 - 1:30PM, LUNCH BREAK
1:30PM PRIZE DRAWING

DON'T FORGET TO PRE-REGISTER!

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CITIZENS BAND RADIOS AND ACCESSORIES

SERVICE ON HAM & CB EQUIPMENT

4,000 **FREQUENCY
CAPABILITY**

144-148 MHz,
P.L.L. Synthesized

400 frequencies
in 10 KHZ steps
+
400 more frequencies
with 5 KHz shift-up

A black Midland Model 13-510 radio is shown from a three-quarter front view. It has a large speaker on top, a digital display, and several control knobs and switches on the front panel. The Midland logo is visible on the top of the speaker.

Push Button Encoding Mike

Model No. 1525

**Drake
1525EM**



- Microphone and auto-patch encoder in single convenient package with coil cord and connector. Fully wired and ready for use.

B & J Two Way

+ + + AMATEURS DEPARTMENT + + +

1516 S.E. 44

PHONE 672-1381

OKLAHOMA CITY

ONE BLOCK EAST OF I-35.

TWO METER ANTENNA FOR A SONG

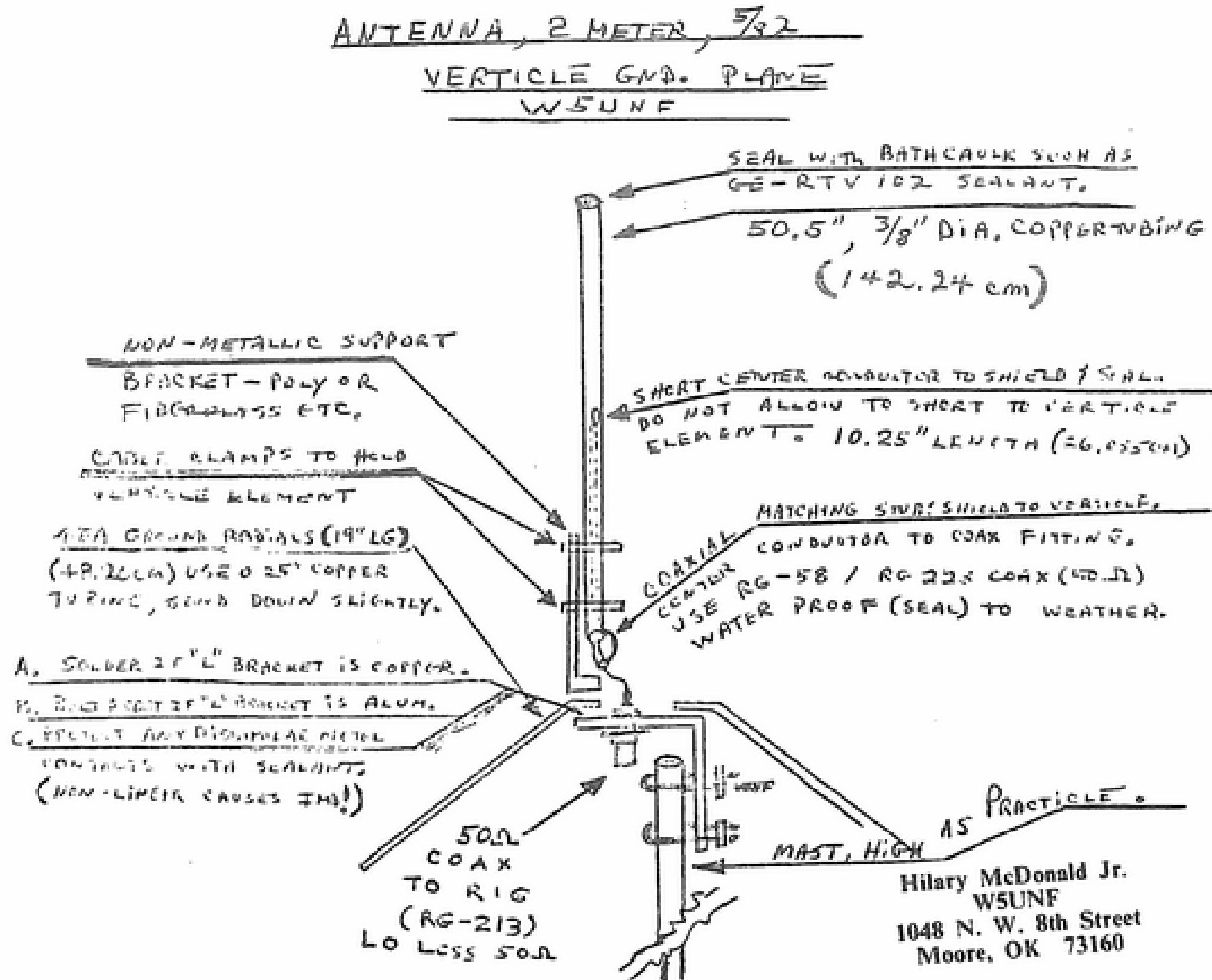
Why swing the ole beam at the home QTH when a good omni will suffice?

A 5/8 wavelength antenna will indeed display gain over that of a 1/4 wavelength vertical antenna.

The antenna design described in this article is unique in that the matching stub is tucked away neatly inside the vertical element of the antenna.

A coil and capacitor type matching scheme is, at best, tricky to adjust and obtain a good match to the complex Z of a 5/8 wavelength vertical. The stub is both easy to construct and presents a good match to the two meter rig. Four antennas of this design have been constructed and all have performed well.

Break out the copper tubing and try it.



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COUPON

AN OPEN LETTER TO ARRL

Dear Jack Gant.

You said you could not know what we wanted unless we told you, so here it comes.

In July 1977 QST, page 96, under "What do we talk about?", the question is asked, "What does one do when he hears improper, immoral, obscene language on the air?"

The article says in part, do not report it to FCC, and do not call ARRL.

Jack, this is a national problem, and needs to be handled on the national level. Radio signals at 3922 kHz from Calif., Nev., Colo., and Okla. do not stop at state borders.

I want the ARRL to use every means possible to silence any radio station that radiates such filthy and obscene language that it violates federal law. That is what I want.

If there are amateurs that disagree, I want them to let you know their opinion, but I hope my thinking is correct.

Best Regards,

C. J. WB5TKG

AAA HAM SHACK

"CQ! AMATEUR RADIO EQUIPMENT-C.F.'S-SCANNERS-ANTENNAS-ACCESSORIES Complete Ham Store. FCC Licensed Technician. Bank Americard and Master Charge. "ART"-WB5ZQP -Invites you to come in and see the lounge area and free coffee. Bring one of your QSL cards to display on the wall, and browse around the store. KYL, YLs, and the harmonics are also welcome. Give us your ideas on a better Amateur Store. What products should be carried? What new products?"

HAM SHACK HAM SHACK HAM SHACK HAM SHACK HAM SHACK

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19 Jun 77

Dear Joe:

Pse print these advs in C & E.

FREE! The following xformers, all with 230-V primary:
10 V, 13 A; 5.1 V, 15A; 5.15 V, 22A, 10 V, 6.5 A,
6.3 V, 1.5 A; 5 V, 7.5 A. ~~Pr~~ mni taps fm 190 to 250
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one, you must take all! W5JJ, ph. 789-3788.

FOR SALE: Two brutes of 110 to 220 xformers, one at
0.48 kVA continuous and the other 0.2 kVA continuous.
\$10 and \$5, respectively. One 115 V to 5 V @ 6 A and
5V @ 3 A, \$2. W5JJ, 5824 N. W. 58 St. Warr Acres.

Tnx, Joe.

73,

C. J.

FOR SALE: Globe Chief transmitter, 10-80 m. \$30.00
Al Bruning, WB5OHK, Choctaw, phone 390-2983.

THE AMERICAN RADIO RELAY LEAGUE, INC.



TWO-LETTER CALLS

Extra Class licensees qualifying under provisions adopted in the First Report and Order on Docket 20092 may select a two-letter call of their choice. To aid applicants in this first phase, these tables show all one by two issues in the 48 contiguous states as of June 14, 1977.

Each suffix for a given call area is listed individually in alphabetical order; alphabetically according to the first letter of the suffix as you read across a line from left to right, and alphabetically according to the second letter of the suffix as you read down a column. The appropriate "W", "N" or "K" prefix appears at the beginning of each line. A slash through a suffix indicates it has been issued, and is not available for assignment. In some call areas, such as the 4th, where few 1 x 2 calls are available, circles are used to indicate which suffixes are available.

A proper application includes a completed FCC Form 610 and a photocopy of present license. It is no longer necessary to provide proof of when you first obtained your Extra Class license since effective July 1, 1977, all Extra Class licensees are eligible for 1 x 2 calls. Mail to: FCC, Box 1020, Gettysburg, PA 17325. There are no longer any fees for any sort of amateur license application. Send no money with your application.

All applications are processed on a first-come, first-served basis consistent with the Report and Order. Therefore, this should be used only as a guideline. Silent Key calls are not available for reassignment until they have been unassigned for at least one year. The Commission suggests that a list of alternate choices, in order of preference, be attached, or that instructions be given as to whether a call of FCC's choice will be accepted.

All Extra Class licensees are eligible for 1 x 2 calls effective July 1, 1977. In reality the FCC will accept applications for 1 x 2 calls during the two week period preceding July 1, 1977, and hold them for processing until July 1, 1977.

Effective March 3, 1977, the FCC has imposed a moratorium on the issuance of new secondary station licenses. Therefore, do not try to have your requested 1 x 2 call assigned to a new secondary station. You must modify an existing license in order to obtain a 1 x 2 call. In other words, you must relinquish a call you now have.

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TWO-LETTER CALLS

July 1, 1977

K	AA	BA	CA	DA	EA	FA	GA	HA	IA	JA	KA	LA	MA	NA	OA	PA	QA	RA	SA	TA	UA	VA	WA	XA	YA	ZA
N	AB	BB	CB	DB	EB	FB	GB	HB	IB	JB	KB	LB	MB	NB	OB	PB	QB	RB	SB	TB	UB	VB	WB	XB	YB	ZB
W	AC	BC	CC	DC	EC	FC	GC	HC	IC	JC	KC	LC	MC	NC	OC	PC	QC	RC	SC	TC	UC	VC	WC	XC	YC	ZC
K	AD	BD	CD	DD	ED	FD	GD	HD	ID	JD	KD	LD	MD	ND	OD	PD	QD	RD	SD	TD	UD	VD	WD	XD	YD	ZD
N	AE	BE	CE	DE	EE	FE	GE	HE	IE	JE	KE	LE	ME	NE	OE	PE	QE	RE	SE	TE	UE	VE	WE	XE	YE	ZE
W	AF	BF	CF	DF	EF	FF	GF	HF	IF	JF	KF	LF	MF	NF	OF	PF	QF	RF	SF	TF	UF	VF	WF	XF	YF	ZF
K	AG	BG	CG	DG	EG	FG	GG	HG	IG	JG	KG	LG	MG	NG	OG	PG	QG	RG	SG	TG	UG	VG	WG	XG	YG	ZG
N	AH	BH	CH	DH	EH	FH	GH	HH	IH	JH	KH	LH	MH	NH	OH	PH	QH	RH	SH	TH	UH	VH	WH	XH	YH	ZH
W	AI	BI	CI	DI	EI	FI	GI	HI	II	JI	KI	LI	MI	NI	OI	PI	QI	RI	SI	TI	UI	VI	WI	XI	YI	ZI
K	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	IJ	JJ	KJ	LJ	MJ	NJ	OJ	PJ	QJ	RJ	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ
N	AK	BK	CK	DK	EK	FK	GK	HK	IK	JK	KK	LK	MK	NK	OK	PK	QK	RK	SK	TK	UK	VK	WK	XK	YK	ZK
W	AL	BL	CL	DL	EL	FL	GL	HL	IL	JL	KL	LL	ML	NL	OL	PL	QL	RL	SL	TL	UL	VL	WL	XL	YL	ZL
K	AM	BM	CM	DM	EM	FM	GM	HM	IM	JM	KM	LM	MM	NM	OM	PM	QM	RM	SM	TM	UM	VM	WM	XM	YM	ZM
N	AN	BN	CN	DN	EN	FN	GN	HN	IN	JN	KN	LN	MN	NN	ON	PN	QN	RN	SN	TN	UN	VN	WN	XN	YN	ZN
W	AO	BO	CO	DO	EO	FO	GO	HO	IO	JO	KO	LO	MO	NO	OO	PO	QO	RO	SO	TO	UO	VO	WO	XO	YO	ZO
K	AP	BP	CP	DP	EP	FP	GP	HP	IP	JP	KP	LP	MP	NP	OP	PP	QP	RP	SP	TP	UP	VP	WP	XP	YP	ZP
N	AQ	BQ	CQ	DQ	EQ	FQ	GQ	HQ	IQ	JQ	KQ	LQ	MQ	NQ	OQ	PQ	QQ	RQ	SQ	TQ	UQ	VQ	WQ	XQ	YQ	ZQ
W	AR	BR	CR	DR	ER	FR	GR	HR	IR	JR	KR	LR	MR	NR	OR	PR	QR	RR	SR	TR	UR	VR	WR	XR	YR	ZR
K	AS	BS	CS	DS	ES	FS	GS	HS	IS	JS	KS	LS	MS	NS	OS	PS	QS	RS	SS	TS	US	VS	WS	XS	YS	ZS
N	AT	BT	CT	DT	ET	FT	GT	HT	IT	JT	KT	LT	MT	NT	OT	PT	QT	RT	ST	TT	UT	VT	WT	XT	YT	ZT
W	AU	BU	CU	DU	EU	FU	GU	HU	IU	JU	KU	LU	MU	NU	OU	PU	QU	RU	SU	TU	UU	VU	WU	XU	YU	ZU
K	AV	BV	CV	DV	EV	FV	GV	HV	IV	JV	KV	LV	MV	NV	OV	PV	QV	RV	SV	TV	UV	VV	WV	XV	YV	ZV
N	AW	BW	CW	DW	EW	FW	GW	HW	IW	JW	KW	LW	MW	NW	OW	PW	QW	RW	SW	TW	UW	VW	WW	XW	YW	ZW
W	AX	BX	CX	DX	EX	FX	GX	HX	IX	JX	KX	LX	MX	NX	OX	PX	QX	RX	SX	TX	UX	VX	WX	XX	YX	ZX
K	AY	BY	CY	DY	EY	FY	GY	HY	IY	JY	KY	LY	MY	NY	OY	PY	QY	RY	SY	TY	UY	VY	WY	XY	YY	ZY
N	AZ	BZ	CZ	DZ	EZ	FZ	GZ	HZ	IZ	JZ	KZ	LZ	MZ	NZ	OZ	PZ	QZ	RZ	SZ	TZ	UZ	VZ	WZ	XZ	YZ	ZZ
W	AA	BA	CA	DA	EA	FA	GA	HA	IA	JA	KA	LA	MA	NA	OA	PA	QA	RA	SA	TA	UA	VA	WA	XA	YA	ZA

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 April, May, June, July, Aug., Sept., Oct., Nov., and Dec. 1969-
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NCC IN BIG " D "
Or
"Doing My Bit for Computer Technology"

To paraphrase FDR's famous quotation, the advent of the microprocessor promises a computer in every home. Digital has taken over. The home computer market is expected to hit about 4 billion (dollars) in 1979 and 6.1 Billion in 1981. The expected growth rate of the market is 110% through 1980. Electronic News reports that many experts also predict that every middle class home will have a computer system by the early 1980's and the home computer market will, by 1985 make the growth of CB radios look inconsequential.

As Intel, Motorola and Mostek have been busily preparing nex exotica in the way of chips, peripherals and other goodies, literally hundreds of manufacturers, many Mom and Pop outfits, have sprung up to provide computer systems for the masses. Most prominent are Mits, Digital Group, Imsai, Polymorphic Systems, Apple Computer Company, and Southwest Technical Products, just to name a few. Amateur Radio enthusiasts find themselves particularly vulnerable to entering this market as both consumers and manufacturers. If you are willing to spring for a few thousand (about the cost of about 5 HT's), you can cart home a particularly sophisticated system. But it doesn't always take expenditures in the kilobuck region to join the fun. There are several simple systems encompassing a single board that can serve as a beginning instructional device and introduction into the world of micros. And the number and types of new systems available are growing every day. Which brings us to the point of my dissertation and that is the National Computer Conference in Dallas this past June 13-16.

The NCC is sponsored each year by several professional computer societies including the American Federation of Information Processing Societies, the Association for Computing Machinery, the IEEE Computer Society and several others. There was over 100,000 square feet of exhibit space this year at the first NCC held in the Southwest. And this year marked the first time that a Personal Computer Fair and Programming contest was held at an NCC. The show represents virtually every major (and in the case of personal computing, a lot of minor) manufacturer of computer machinery. Attendance is mandatory for anyone who professes even a mild interest in the subject, especially since the next conference will be in California and may not return to the Southwest for some time.

This story began when Roger WA5JXX wangled me a ticket to the NCC for the exhibits at the Dallas Convention Center. Transportation sort of fell into my lap when Chuck KP4DJT and Larry WB5POW invited me to tag along on an airplane ride to "Big D" as a hospital run for Chuck's ailing IC-245. I suggested that we scrounge a few more tickets and take in the NCC. "A great suggestion" so we decided to go down on Wednesday, the third day of the exhibits. All of us were interested in the Personal Computing Fair as well as what some of the "Big Boys" were doing. I expected to be immersed in a flood of Pong and Tank games, but surprisingly found many companies now past the game stage and providing both hardware and software of increasingly modern sophistication.

Chuck and Larry left Will Rogers about 7:00 a.m. and picked me up in Norman. Humm. A few clouds here and there, but since both were IFR rated, this didn't appear to me much of a problem. A slight headwind and a quick drop into the clouds and about an hour and a half later, I was cooling my heels at Love Field. Riding in small airplanes is getting easier for me. At least I have progressed from the "What happens if the wing falls off?" paranoia that characterized my earlier experience in manned flight. I now believe that airplane wings will not fall off unless you fly in thunderstorms, but I do become concerned when

I first noticed that you can't see the ground when flying in clouds. I don't know why this surprised me. I can't see the sky on cloudy days either. In any case, I don't expect to sprout wings anytime soon, so if I have to float through the air (though not with the greatest of ease), it will have to be in an airplane. As a super test for both my stomach and machismo, I decided to forego my usual "dramamine cocktail" (a glass of milk and two dramamine tablets, shaken, not stirred) as a part of my normal personal preflight. The flight was a little bumpy, but no difficulty on both an aerodynamic or gastric level.

From the airport, we made a quick dash to Icom East, picked up some nifty connectors for the IC-22S and dropped off Chuck's ailing IC-245 for an internal transplant operation. It was here that we managed out first coup of the day by scoring a few tickets for the NCC from one of the local gentry. These tickets are ordinarily ten bucks apiece (apparently to keep out the riff raff and other winos looking for a cool and comfortable place to hang out), but are easily available for professionals from the various exhibitors. A dash downtown to the Convention Center and the normal Dallas parking (none available) left me wishing I had brought my hiking boots (or a Dick Tracy air car). What luck! We found a guy pulling out of a parking space about half a block from the Center. We snarfed it up and attempted to feed a two hour meter about four hours worth of nickels so we wouldn't have to make frequent ticket prevention trips to the car. The Dallas police apparently (in a burst of goodwill) forgot we were there.

A quick perusal of some of the commercial exhibitors and then lunch was a priority item. Some of the commercial boys had impressive booths. Data General's looked like something they drug off the set of "Star Wars" and they had a whole host of young ladies to escort you through the large silver saucer like structure. Texas Instruments had their new SR-60 programmable prompting calculator (alphanumeric display that answers your question with a question) along with a host of other goodies and chips. Ramtek and Intelligent Systems Corporations had some absolutely beautiful color video displays with "walking graphics!" Intel was showing their new MCS-8085 system featuring their new 8085 processor. This device is just perfect for controlling a repeater or remote base and it all fits on a single board with just one five volt supply required.

All the manufacturers had tons of literature that they were willing to send you. I increased my button collection to include a few new ones from National and others. Which brings me to the method of getting additional information from a manufacturer which has to be one of the niftiest around. As you registered for the conference, you received a convention badge very similar to a credit card made of plastic. They had a number of ladies typing your registration information out on a video display and then when she finished, you would hear a terrific amount of clanging from a machine directly behind her. It huffed and puffed and chugged for a few seconds and then your new badge would drop out of a slot. Each person was then issued a plastic holder to wear on their coat. Whenever you requested additional information, the manufacturer's representative would take your plastic badge and run it through an imprinting device just like a credit card and make a note of what you were interested in. This made it unnecessary to carry around tons of paper. For those who didn't mind the body building exercise, there were lots of large plastic convention sacks provided by Extel, among others. As we were leaving the Center later in the day, we passed by the machines and their operators and I managed to cajole a few of ladies into making me a badge with my call on it. This was such fun that I also got a few more made up with special slogans for various occasions. Nifty.

After lunch in the local Ramada, it was back to the Convention and a tour through the Personal Computer Fair. Not quite as fancy as some of the high dollar boys upstairs, but these guys do have a lot of heart. Of course, there are a few high rollers such as Mits, Imsai and SWTP who do have impressive displays. Imsai

had their new 8048 Single Board Computer Controller featuring the new Intel 8048 suitable for use with model railroads, energy conservation systems, ham radio (their words), household lights, light shows, etc. The system uses a single five volt supply. Several other companies were beginning to feature single board controllers for under \$200.

The development and entry into the market seems to follow an established pattern. Each company begins by offering peripherals compatible with devices or systems already made. When their market grows enough, they begin to offer their own mainframes. A perfect example is Parasitic Engineering. They started out offering hardware "fixes" for clock troubles in the Altair 8800 system and now have expanded their line to include complete computers with various options. Cromenco offers a wide variety of plug in compatible cards for the S-100 buss (Altair standard) including CPU, EPROM, PROM, Analog interface, TU-URT digital interface and the TV Dazzler that allows you to connect up a color TV to your computer and draw pictures with joysticks or by program.

Lots of computer stores were represented including several locals. I saw Charles Weddington from High Technology in OKC at the Apple Computer Company booth showing off the new Apple II personal computer. This system uses the MOS Technology 6502 processor and provides memory in 4K or 16K increments up to 48K, ASCII keyboard interface, audio cassette, Basic and Video Display. The Basic offered, however, is integer only. The Digital Group had the same setup that they featured at the Dayton Hamconvention with their voice synthesizer (something strange about listening to a disembodied voice speaking latin or calling CQ) and their Z-80 system.

Lots of companies are progressing into Microprocessor control of music synthesizers for computer generated music. Solid State Music offered a music synthesizer board that is plug in compatible with the Altair buss. PAIA Electronics on Wilshire in OKC had several synthesizers around and a new computer controller (the model 8700) based on the 6503 for just \$149.95. They are planning a whole host of software for multizone fire and burglar alarms, heat and air conditioning control, electronic music synthesizer interface, model railroad, etc. I understand that we just missed Leon Russell who was at the PAIA booth earlier playing around with the synthesizers. I also found out that they are publishing a magazine, Polyphony, devoted to music synthesizer development.

I made a quick stop by the Byte Magazine booth (not much happening there) and briefly discussed the appreciated value of my complete set of Byte Magazines. It seems that there have been several outrageous offers to deal in the early issues of the magazine at incredible prices. Those magazines are rare and enthusiasts are looking for them in large hordes. Maybe I can trade someone a computer for the complete set? Kilobaud was there along with Creative Computing. Creative was the only group generating a lot of excitement. Seems they were giving away free issues if you would give them your name and address. I got one issue myself, then got Chuck to go through and get me the other issue. Not bad, they feature some science fiction and movie reviews along with the usual hardware-software stuff. I also managed a copy of Mini-Micro Systems, a professional journal for the commercial user.

Overall, interest in terminals and floppy disc systems seems to prevail. The home computer market is expanding, but still must get over the hardware hump before it will become a reality. There is still a lot of emphasis on "gamesmanship" and visual displays, but I suspect that this is used as a lot of fluff in order to attract the masses. The increased emphasis, by both companies and individuals, on single board controllers will eventually provide a terrific expanded market for computers. It will be increasingly easier to connect a computer to the local project, provide it with a limited amount of memory, a few interfaces, and then let it take over controlling the air conditioner, doorbell, television,

repeater, model railroad, and more. It is difficult to justify tying up your multi-thousand dollar system to perform these projects (I guess you use them for game-manship such as "pong" and "tank"). Computers, as a consumer market, will not take off in a big way until they can be shown as useful in the everyday sense, just like CB radios were during the truckers strike. I think that Single board computers and controllers will provide a lot of that impetus.

Leaving the Convention, Chuck, Larry and I jetted back to Icom East and found that not only was the IC-245 not ready, it hadn't quite made it to the bench yet. Chuck decided to leave it and have the SSB adaptor installed and pick it up later. We dashed out, hoping to avoid the afternoon traffic, both in the streets and at the airport, and got back to the plane about 5:30 or so. A check of the weather showed a few clouds between Dallas and OKC, but otherwise as Larry put it, "No problem." We managed to get clearance in rapid time and back to the city. All in all a fine trip and one of the first computer conferences for all of us. Get interested. The association between computers and amateur radio is inevitable. I found that many of the people manufacturing equipment at the personal computing section were just small groups of interested individuals, just like you and I, who are finding that they can make their hobby pay off. If indeed the computer market does take off as many are predicting, these people will be in the forefront and, if their product is good, stand to make a few dollars. The May 1977 issue of the IEEE Spectrum provides a good background on both hardware and information (magazines such as Byte, Kilobaud, Interface Age, SCCS Interface, Dr. Dobbs Journal of Computer Calisthenics and Orthodontia, Personal Computing, and Creative Computing).

Micheal Salem WA5EPK

THE DAYTON CHRONICLES

What is it going to take to convince hundreds of Oklahoma City Amateurs that the Dayton Hamconvention is the Mecca for fleamarket enthusiasts? And as the yearly attendance pushes higher and higher, who can contemplate over 16,000 hams milling and walking around the HARA Convention site. How can you explain a flea market that expanded by about 1/3 and still had trouble getting everyone in? Or what about driving by the Convention center the night before the flea market opened and finding card eight abreast and over 20 deep waiting to get in?

Folks, there is nothing like it. It is bigger and still growing. Hoss WA5ZAI said that there is talk of expanding and moving to another site, but the difficulty lies in making accommodations for the flea market which is gigantic by any standard. The manufacturers exhibits also have expanded. GLB was showing their new synthesizer for 450 Mhz. Spectronics had the "SpecScan" that hooks to your IC-22S and turns it into a scanner, Spectrum International offers the new 432 transverter, KLM was there with their new Multi 2700, Motorola had M6800 Evaluation Kits plus tons of spec sheets for their power transistors, Info - Tech had their new Morse Keyboard, Astro offered the Astro 200, digitally tuned 80M-10M SSB transceiver from CIR Industries. Hobb-y-tronix had a digital alarm clock that played revelie to wake you up. Wonder if you can get one that plays Boomer Sooner? (Nope, too many notes). This was all well and good, but the flea market was king. And we made a special effort to get there on Friday morning so we could peruse the various surplus stores that morning. I bought an assortment of almost 500 capacitors for only \$15.00. At another place, I found a Monsanto Frequency Counter for just \$150. After investing another \$150 or so, I will have a commercial type counter that will feature not only frequency counting, but period, period average, frequency ratio, and a plug-in that brings the mainframe sensitivity down to 1 millivolt. Another plug in takes the counter to 500 Mhz and yet another allows me to time events down to 100 nanoseconds. At the flea market on saturday, bargains were all over. Roger, WA5JXX

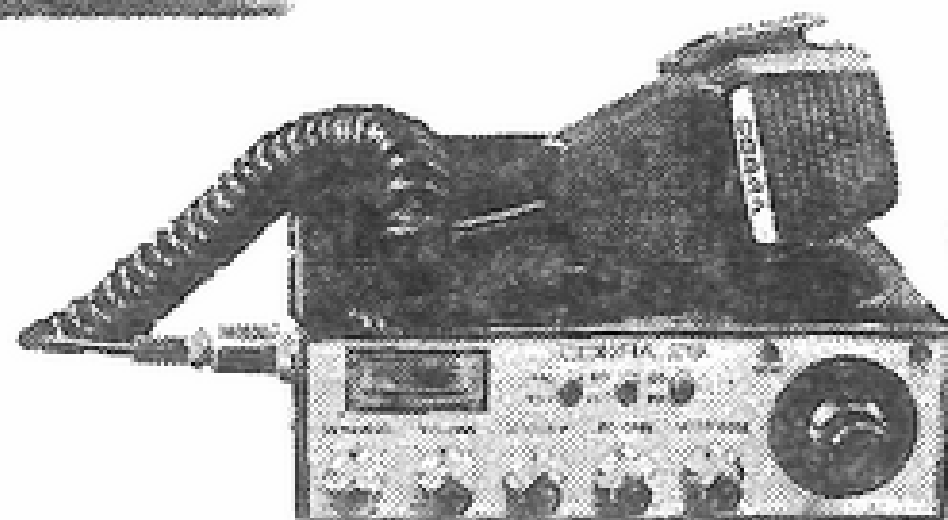
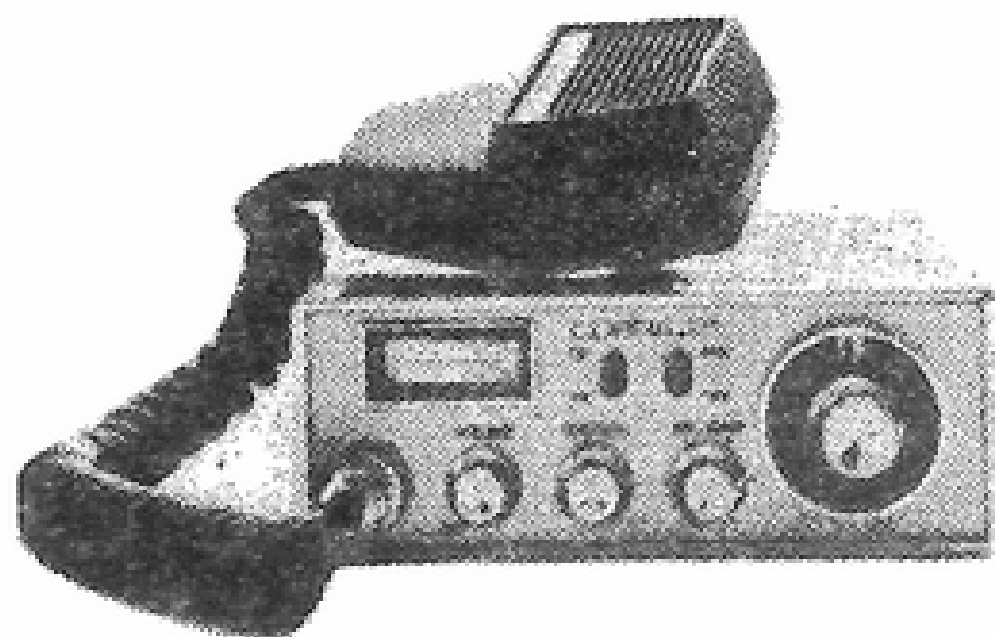
quickly found a mint HT-220 for two meters already on frequency plus chargers. Events really got moving when I stumbled across the Motorola Recon center and some terrific buys in 450 HT's. Dennis WB5ISN snarfed a few of those. There was everything from test equipment to discrete parts. All the hard to get stuff was there. I found a VE3 who was selling some terrific rotary inductors that were ideal for antenna tuners for just \$20. I don't see how he could afford to bring them across the border for that. Small transformers for audio impedance matching (600ohms to 600 ohms etc), of very high quality for just \$1.00/each.

Every amateur who enjoys this type of activity should begin making plans (and saving money) for next year. The weather cooperated beautifully and except for some clouds and rain on the flight up and back, the trip was terrific. The Hamconvention has expanded to three days, so there is a leisurely friday afternoon available for perusing the manufacturers exhibits, then ready for the mad scramble in the flea market on Saturday and Sunday. The program committee had forums on everything from microcomputers to weather satellite to ten meters. The Dayton Amateur Radio Association does a terrific job in providing organization and security. Guards are watching the cars and parking lots. Roy Neal, K6DUE from NBC News was the speaker at the banquet and the prizes ranged from a TS-820 to a complete Drake Station down through a Dentron 512B Amplifier. W5NUT from SHawnee won a two meter transceiver. So if you have a hankering for a great hamfest, see Dayton next year. It should be even more monstrous than this year.

Micheal Salem WA5EPK

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"BILL", WB5YDM wants to greet all AMATEURS attending FAM HOLIDAY.



Club
NEWS

W5L0W
The Elmer Goodier Memorial
Station

MINUTES OF JUNE MEETING

MEETING WAS CALLED TO ORDER 8PM BY VICE PRESIDENT KEN, WB5KHU WITH 20 MEMBERS AND GUESTS PRESENT. ANNOUNCEMENTS REGARDING FIELD DAY WERE MADE. PLANS FOR WATER-MELON PARTY IN AUGUST WERE DISCUSSED. STEVE, W5VCJ DISCUSSED NOSTALGIA MEETING SCHEDULED FOR JULY. PHOTOS, WALLPAPER AWARDS, LETTERS, ETC., FROM YEARS PAST ARE GOING TO BE GATHERED THE SATURDAY BEFORE MEETING. PARTICULARLY DESIRED ARE ITEMS RELATED TO THE "BIG ONE" CIRCA, 1958 TO ILLUSTRATE THE WORLDWIDE PROPAGATION CONDITIONS ON 6 METERS.

H.O., WA5MLT, ANNOUNCED AVAILABILITY OF AMATEUR LICENSE CALL PLATE APPLICATION BLANKS. HE IS NEW ARRL STATE EMERGENCY COORDINATOR.

LEONARD, WA5FSN, ANNOUNCED BEAVER CITY HAMFEST JULY 17 WITH COVERED DISH DINNER (BEAVER IS IN THE PANHANDLE NEAR LOGAN). HE MADE A PLEA FOR MORE NET CONTROL STATIONS AND LOGGING STATIONS FOR 5 O'CLOCK NET AND OKLAHOMA TRAFFIC AND WEATHER NET (5:45PM) ON 3900 MHZ.

YOUR SECRETARY WAS HONORED TO PRESENT A TWO PART PROGRAM ON STATION ACCESSORIES AND ADVANCED TEST EQUIPMENT. A FEW WHO TOOK THE RISK, WERE CHAGRINED TO SEE WHAT THEIR SIGNALS LOOKED LIKE ON A SPECTRUM ANALYZER, OOPS!

MEETING WAS ADJOURNED AT APPROXIMATELY 9:30 AND ALL RECONVENED AROUND THE COFFEE POT.
JOE, WA5TRS/K5JB, SEC'Y

JULY MEETING - 20 YEAR ANNIVERSARY

STEVE, W5VCJ, A CHARTER MEMBER OF VHF CLUB IS ORGANIZING A NOSTALGIA MEETING AND CONTRACTING OTHER "OLD TIMERS" FOR MEMORABILIA OF THE EARLY DAYS OF "6 METER NET" AND THE VHF CLUB. HE IS SOLICITING PHOTOGRAPHS, MOVIES, AWARDS, BANNERS AND THE LIKE THAT TIE IN WITH CARAVANS, CONTESTS, PARTIES, FIELD DAYS, ETC.

IF YOU HAVE ANY TREASURES CONTACT STEVE OR BRING THEM DOWN TO THE RADIO SHACK JULY 9 (SATURDAY, THE WEEKEND BEFORE MEETING. THE MEETING WILL BE ON JULY 15). HE WILL ORGANIZE THE PROGRAM AND SEE THAT A PROPER DISPLAY IS PUT UP FOR CLUB MEETING NITE.

BE SURE AND COME TO MEETING JULY 9 AND ENJOY A RARE OPPORTUNITY TO LOOK OVER THE HISTORY OF THE CLUB.
JOE, K5JB

EMI - PART 2

LAST MONTH I RERAN AN EARLIER ARTICLE ON ELECTROMAGNETIC INTERFERENCE, EMI, MAN-MADE STATIC COMING FROM FAULTY APPLIANCES OR POWER LINE EQUIPMENT. IN THAT ARTICLE I COVERED SEVERAL TECHNIQUES I HAD USED AND FOUND MORE OR LESS SUCCESSFUL IN TRACING DOWN SOURCES OF EMI.

SINCE THAT TIME I HAVE HAD A LITTLE MORE EXPERIENCE, MOSTLY IN HOW TO DO IT WRONG. I DIDN'T THINK I WAS READY TO FURTHER EXPOUND ON THE THE SUBJECT SINCE I HAD NOT LEARNED ANY MORE BUT I WAS GIVEN A COPY OF A LETTER FROM THE ARRL TO A LOCAL AMATEUR ADVISING HIM OF STEPS TO TAKE ONCE HE HAD DETERMINED THE POWER COMPANY WAS AT FAULT.

IN SUMMARY, HAROLD STEINMAN, K1FHN, ASSISTANT MANAGER, MEMBERSHIP SERVICES, ARRL RECOMMENDS:

1. CONTACT POWER COMPANY. IT WILL PROBABLY SEND OUT A REPRESENTATIVE.
2. IF PROBLEM NOT SOLVED, WRITE A REGISTERED LETTER, RETURN RECEIPT REQUESTED, TO THE POWER COMPANY. INFORM IT OF THE PROBLEM AND QUOTE FCC RULES AND REGULATIONS, PART 15.25 WHICH PROHIBITS AN INCIDENTAL RADIATION DEVICE FROM CAUSING HARMFUL INTERFERENCE. SAVE A COPY OF THIS LETTER.
3. IF NOT SATISFIED IN ABOUT 30 DAYS, SEND A COPY OF THE LETTER TO THE FCC FIELD OFFICE IN THE APPLICABLE DISTRICT (AT DALLAS, IN OUR CASE).



Club NEWS

W5LQW
The Elmer Goddard Memorial
Station

THIS ADVICE IS GOOD, WHEN IT HAS BEEN DETERMINED THAT THE POWER COMPANY IS AT FAULT. ONE ARGUMENT I HEARD WAS THAT ANY RADIATION FROM POWER LINES IS FAULT OF THE POWER COMPANY EVEN IF SOURCE OF EXCITATION IS AN APPLIANCE CONNECTED THERETO. I CAN'T AGREE WITH THIS. A FAULTY THERMOSTAT IN A HOME IS AN INCIDENTAL RADIATION DEVICE, NOT THE POWER LINES TO WHICH IT IS CONNECTED. WERE IT NOT, THE FCC COULD BE TOLD, IN EXPLANATION FOR A SPURIOUS OUTPUT TICKET, THAT THE ANTENNA, NOT THE RIG, WAS AT FAULT BECAUSE IT WAS RADIATING THE ENERGY.

ANOTHER REDUCTION OF THIS ARGUMENT TO THE ABSURD IS AN EXPERIENCE SOMEONE I KNOW HAD WITH A GIBSON GIRL TRANSMITTER WHEN HE WAS A KID. HE CLIPPED THE ANTENNA LEAD TO THE TELEPHONE LINE. THE SECOND HARMONIC OF THE LITTLE TRANSMITTER COULD BE HEARD TEN MILES AWAY! WHO DO YOU THINK WOULD BE AT FAULT IN THIS CASE, THE KID OR MA BELL?

SO, FOR ALL PRACTICAL PURPOSES, THE ONUS IS STILL THE RADIO AMATEUR'S. HE HAS TO DETERMINE THAT THE CAUSE OF HIS EMI IS THE FAULT OF THE POWER COMPANY BEFORE HE CAN APPLY PRESSURE ON THE COMPANY. IF THE SOURCE OF ENERGY IS A FAULTY APPLIANCE, HE CAN APPLY THE ABOVE THREE STEPS TO THE OWNER OF THE APPLIANCE IF NECESSARY. THE POWER COMPANY REPRESENTATIVE MAY CONTACT A HOMEOWNER FROM WHOSE RESIDENCE A NOISE IS COMING AND DO THE SAME DIPLOMATIC JOB YOU WOULD HAVE TO DO (STEP 1) BUT IF NO SATISFACTION COMES FORTH, IT IS NOT THE POWER COMPANY'S JOB TO CARRY ON WITH STEPS 2 AND 3 BECAUSE THEY ARE NOT BEING INTERFERED WITH. IT'S YOUR JOB MAN!

I HAVE LITTLE SYMPATHY FOR ONE WHO EXPENDS ALL HIS ENERGY TIGHTLY GRIPPING HIS PUSH TO TALK SWITCH AND BITCHING ABOUT THE PROBLEM WHEN A LITTLE STROLL IN THE NIGHT AIR WOULD DO WONDERS FOR ALL KINDS OF AILMENTS SIMULTANEOUSLY.

ONE TECHNICAL TIDBIT I HAVE TO PASS ALONG IS THIS. IT IS IMPORTANT TO SEARCH FOR SOURCE OF A NOISE WITH EITHER A RECEIVER ON THE SAME FREQUENCY WHERE THE NOISE IS BEING HEARD AT HOME OR A RECEIVER THAT IS HEARING THE SAME NOISE SOURCE ON ANOTHER BAND. IT IS NOT TOO HARD TO LISTEN ON THE BAND WHERE THE INTERFERENCE IS HAPPENING AND TUNE FOR THE NOISE A SECOND RECEIVER WHICH IS PORTABLE. LISTEN FOR A WHILE AND DETERMINE IF THE NOISE HAS THE SAME SIGNATURE ON BOTH FREQUENCIES. LISTEN FOR INTERMITTENT CHARACTERISTICS THAT ARE SAME. PUT THE PORTABLE RECEIVER NEAR A CONVENIENT OUTLET OR LIGHT SWITCH AND TRY TO PICK UP THE SIGNAL FROM THERE. TRY PUTTING THE RECEIVER NEAR A FEEDLINE GOING TO AN ANTENNA. IF YOUR EQUIPMENT IS GROUND-ED, THERE SHOULD BE LARGE RF CURRENTS FLOWING ON THE FEEDLINE INCREASING THE CHANCE OF THE PORTABLE RECEIVER PICKING UP THE NOISE SIGNAL.

LAST MONTH I DID A CRACKER JACK JOB OF TRACING DOWN TWO UTILITY POLES WHICH WERE RAISING HELL ON 2 METERS. I WAS TRYING TO FIND A PROBLEM WHICH WAS EATING ME UP ON 75 AND 40 METERS. THE ONLY PROBLEMS WERE THAT I COULDN'T HEAR THE 2 METER NOISE FROM MY HOUSE (DOES A TREE FALLING IN THE FOREST MAKE A SOUND IF THERE IS NOBODY THERE TO HEAR IT?) AND I OVERLOOKED A PIECE OF WIRE HANGING OVER A SECONDARY WHICH WAS RAISING HELL ABOUT 60 FEET FROM MY ANTENNA. THE POWER COMPANY FIXED THAT WITH NO HELP FROM ME!

OH WELL, LIVE AND LEARN. IF ANYONE HAS ANY SUGGESTIONS OR EXPERIENCE TO PASS ALONG, LET ME KNOW. HOWEVER, IF YOUR SUGGESTION IS TO CALL THE FCC, WRITE A LETTER OR PASS A LAW, GIVE IT TO SOMEONE ELSE, I HAVEN'T GOT THE TIME TO PLAY GAMES. MY RADIOING IS SERIOUS BUSINESS!

JOE, K5JB

WORLD ADMINISTRATIVE RADIO CONFERENCE (WARC)

CARL, W5JJ, SUPPLIED A SPECIAL BULLETIN FROM THE LEAGUE REGARDING THE FCC'S FIFTH NOTICE OF INQUIRY RELATIVE TO WARC. BRIEFLY, THE FIFTH NOTICE CONTAINS PROPOSALS TO: NOT ESTABLISH A BAND AT 160-190 KHZ, TO MAINTAIN 1800-1900 KHZ, AND 1900-2000 KHZ SHARED WITH LORAN; TO CONTINUE AMATEUR EXCLUSIVE USE OF 3500-3900 AND SHARED USE OF 3900-4000 KHZ; MOVE 40 METER BAND TO 6950-7250 KHZ AND EXCLUDE BROADCASTERS WORLDWIDE; 20 METERS EXPANDED TO 13950-14400 KHZ, 15 METERS EXPANDED TO 20950-21450 KHZ, A NEW BAND ADDED AT 25760-25860 KHZ AND 10, 6 & 2 METERS UNCHANGED.



Club
NEWS

V510W
The Elmer Gooder Memorial
Station

IN THE HIGHER SPECTRUM, 220-225 IS PROPOSED FOR AMATEUR ON A SHARED BASIS WITH MOBILE (CB) AND A BUNCH OF DETAIL CHANGES ARE MADE TO 1215 MHZ ON UP. PERSONS INTERESTED IN THE FUTURE OF AMATEUR RADIO SHOULD WRITE THE LEAGUE FOR COPIES OF THE JUNE 2 SPECIAL BULLETIN, FAMILIARIZE THEMSELVES WITH THE CHANGES, FORM AN OPINION AND RESPOND TO THE FCC. THIS IS PROBABLY YOUR LAST CHANCE BEFORE WARC TO PARTICIPATE IN THE PROCESS I CALL LEGISLATION BY PROMULGATION. ONLY A SELECT FEW HAVE SUCH OPPORTUNITY AND YOU ARE THE SELECT FEW. JOE, K5JB

EAVESDROPPING ON THE REPEATER

ONE NIGHT JOE (JB) AND I WERE CARRYING ON A BULL SESSION. I WAS TALKING ABOUT WANTING TO WRITE SOMETHING FOR C & E BUT COULDN'T REALLY DECIDE WHAT IT WOULD BE. WE WERE MUSING ABOUT DIFFERENT CONVERSATIONS WE HAD HEARD ON THE REPEATER SO I THOUGHT, WHY NOT, THAT COULD BE A LITTLE AMUSING, MAYBE EVEN EDUCATIONAL.

I THINK THE MOST MISUNDERSTOOD PIECE OF RADIO EQUIPMENT TO A LOT OF PEOPLE ON F.M. IS THE REPEATER. I HAVE HEARD MANY TIMES ON THE AIR SOMEBODY CARRYING ON A QSO WITH SOME STATION AWAY FROM TOWN AND HE WILL REPORT THAT HE IS NOT COPYING THE LOCAL STATION FULL QUIETING SO THEN THE LOCAL STATION WILL BOOST HIS POWER THINKING THAT WILL TAKE CARE OF IT. WELL, IT WON'T. WHY? BECAUSE THE OUT OF TOWN STATION IS HEARING THE REPEATER TRANSMITTER NOT YOURS, SO ONCE YOU ARE FULL QUIETING INTO THE REPEATER RECEIVER, WHETHER YOUR RUNNING 1 WATT OR 10, AFTER THAT POINT YOU CAN PUMP 1,000 WATTS INTO IT AND IT WON'T MAKE A DIFFERENCE ON THE RECEIVE SIGNAL THE OTHER STATION HEARS (UNLESS YOU MELT THE FRONT END OF THE REPEATER RECEIVER, RUNNING ALL THAT POWER, AND THEN HE WON'T HEAR ANYTHING!!)

THEN WE HAVE ANOTHER TYPE OF PERSON, THE ONE THAT THINKS THE REPEATER IS ALWAYS AT FAULT. BY THIS, I MEAN THE PEOPLE WHO EXPECT THAT THEY SHOULD BE ABLE TO TALK TO THE REPEATER FULL QUIETING 25 MILES OUT RUNNING 1 WATT AND A QUARTER WAVE ANTENNA. THEN WE HAVE THE OTHER TYPE WHO THINK THAT THE REPEATER IS ALWAYS RIGHT. (WHICH, HOPEFULLY IS MOST OF THE TIME, BUT!) IF THINGS DON'T SOUND RIGHT THEY THINK THEY HAVE RIG PROBLEMS WHEN IT MIGHT BE THE REPEATER. THE BEST THING TO DO IS ASK ANOTHER STATION ON THE REPEATER IF HE IS EXPERIENCING THE SAME PROBLEM AS YOU ARE, IF HE IS, THEN YOU CAN PROBABLY SAFELY ASSUME THAT THE REPEATER IS ILL, UNLESS YOU BOTH HAVE BAD RIGS. THE ODDS AGAINST THAT HAPPENING ARE QUITE HIGH. THEN WE HAVE THE RESIDENT REPEATER EXPERTS WHO SEEM TO KNOW MORE ABOUT THE REPEATER AND HOW IT OPERATES THAN THE MAINTENANCE CREW DOES. FOR THOSE PEOPLE, ALL I HAVE TO SAY IS THIS, PLEASE COME AND JOIN US BECAUSE WE CAN ALWAYS USE YOUR HELP. AND, IF YOU CAN'T, THEN JUST USE IT AND LEAVE THE DIAGNOSTICS TO US!

ALL TOO OFTEN, (MAYBE I TAKE THIS PERSONALLY BECAUSE I DO MAINTENANCE ON 34/94) I HEAR COMPLAINTS ABOUT HAVING A CERTAIN PROBLEM SUCH AS NOT BEING ABLE TO TALK TO THE REPEATER FROM A CERTAIN LOCATION, OR THE AUDIO DOESN'T SOUND THE WAY YOU THINK IT SHOULD, OR THE TIME-OUT TIMER IS NOT SET THE WAY YOU WANT IT. WELL, IF YOU WANT SOMETHING CHANGED OR WANT TO KNOW WHY IT IS THE WAY IT IS, PLEASE FEEL FREE TO CALL ME AT HOME. I WOULD VERY MUCH LIKE TO HEAR FROM YOU BECAUSE IF WE DON'T GET FEEDBACK FROM YOU, THE USER, THEN WE CAN ONLY ASSUME THAT THINGS ARE OK. ALSO, IF YOU HAVE ANY IDEAS FOR IMPROVEMENT OF YOUR SYSTEM LET US KNOW BECAUSE IT IS YOUR REPEATER SYSTEM.

ONE LAST THING I WOULD LIKE TO ADD IS THIS. PLEASE FOLLOW SOME SIMPLE GUIDELINES WHEN USING THE REPEATER.

1. DURING RUSH HOURS TRY TO KEEP TRANSMISSIONS FAIRLY SHORT SO THAT IF ANYONE NEEDS TO REPORT AN ACCIDENT, HE CAN.
2. TO SAVE TIME, IF A MOBILE WANTS YOU TO CALL THE POLICE TO REPORT AN ACCIDENT, DO IT WITHOUT HAVING TO ASK HIM IF HE WANTS TO GO TO AN AUTOPATCH MACHINE BECAUSE CHANCES ARE IF HE COULD HE WOULD HAVE DONE SO IN THE FIRST PLACE.
3. REMEMBER, OTHER PROSPECTIVE AMATEURS MAY BE LISTENING TO YOUR QSO SO ACT ACCORDINGLY. RICH, WB6FYL



SIX METER REPEATER NEWS

The six meter repeater is not being used except by about 15 regulars - leaving plenty of dead air space for more people to get on the only six meter repeater in Oklahoma City (maybe in Oklahoma). Some skip contacts during band openings- the Oklahoma six meter side band net meets Mondays at 8 P.M. local time (0100Z) on 50.150 MHz and during the band opening on June 6, 1977, we had 33 check in to the net. Twenty-one stations checking in were from out of state, all the way from Washington state to Florida. WB6NMK reported California stations confirming contacts in Japan on six meters- also one worked VE6JX who said he had worked a JA station on 6- so things are looking up and you techs could be working some DX this summer on six meter. Phone if you get on.

Note Elmo Black recently gave a 1/4 KW six meter f.m. rig to the Auto Patch Club for a better six meter repeater- thanks to Elmo, a friend of Amateur Radio-

73 Frank WB5JBL

SOME THINGS YOU MIGHT LIKE TO KNOW

How do you get an SCM appointment?

It's easy, if you're qualified. Just write your SCM for an application form. You'll find his address on page eight of any QST. He can also answer your inquiries, but SCMs are often busy people and can't handle all their correspondence, so initial inquiries might also be addressed to ARRL headquarters. We'll send you all info on qualifications and an application form, and you can take it from there. Just complete the form for the appointment of your choice and send it (or give it, if you see him occasionally) to your SCM. Then it's up to him.

Fig. 1

SCM Appointment Information

BASIC APPOINTMENTS

Official Relay Station (ORS)
Official Relay Station II (ORS-II)
Official Phone Station (OPS)
Official Bulletin Station (OBS)
Official Observer (OO)
Classes I thru IV
Class V

LICENSE REQUIREMENT

General
Novice
General
Technician
General
Technician

OTHER REQUIREMENTS

15 wpm code speed
10 wpm code speed
None
None
4 years' experience as
General class or higher
4 years' experience as
Technician class or higher
None

FIELD OF OPERATION

Traffic handling (cw)
Traffic handling (beginner)
Traffic handling (phone)
Bulletin transmission
Self-regulation
notices

Official VHF Station (OVS)

Technician

None

Traffic and on-the-air
experimentation (vhf)

LEADERSHIP APPOINTMENTS

Emergency Coordinator (EC)
Route Manager (RM)

Technician
General

None
15 wpm code speed

Emergency organization (local)
Traffic organization and net
management (cw)

Phone Activities Manager (PAM)

General

None

Traffic organization and net
management (phone)

Phone Activities Manager - vhf

Technician

None

Traffic organization and net
management (vhf)

Section Emergency Coordinator (SEC)
Assistant SCM (ASCM)

General
General

None
None

Emergency organization (section)
General assistant to SCM, or per
assigned function

RFI LEGISLATION Things are looking up. A check with the Senate Sub-Committee on Communications a week or so back to see how things were going on S. 864 turned up the encouraging news that the committee had received two (2) letters on the legislative proposal.

A couple of inquiries have been received from other senators but no great amount. This is the measure introduced by Senator Goldwater.



At the time of the inquiry, the opinion was given that interest was so low..... approaching the minimum minimal, that no hearings on the legislation have been scheduled.

It is quite possible that many may have written direct to their senators and this could account for the inquiries. However, it does seem that more effort will have to be made and if you are interested in RFI legislation, it would help to send your comments to:

Senator Ernest F. Holling
Sub-Committee on Communications
233 Russell Building
U. S. Senate
Washington, D. C. 20510

Strike a blow now!!.....so that your neighbors Hi-Fi does not interfere with your DXing in the future.

CAUTION ADVISED IN TAKING EQUIPMENT TO FOREIGN COUNTRIES

The number of radio amateurs traveling and vacationing outside their own countries is clearly on the increase. And almost all of these amateurs want to operate in other countries. Excellent!

There is but one cardinal rule to be kept in mind at all times, in all countries: To operate legally, you need written permission from the telecommunications ministry of the country whose jurisdiction you are in. Oral permission is simply not enough, and therefore not legal.

Many amateurs are learning this the unpleasant way: arriving at customs in a foreign airport, only to have their equipment confiscated because they cannot present this piece of paper. If you are visiting a country which requires that you call in person at the ministry to get your permit, be sure to make advance arrangements with the country's consulate in the U. S. to import your equipment.

Yes, some countries issue reciprocal applicants special call signs (e. g., United Kingdom issues G5xxx calls; France issues F4xxx, etc.), but others will allow you to operate with your own call sign, followed by the Morse "/" or oral "portable" and the prefix of that particular country.

While we're on the subject of taking equipment into other countries, we advise that amateurs be familiar with the amateur regulations of the country they're planning to visit. Taking a 1,000-watt linear amplifier into a country which allows its amateurs to operate with no more than 150 watts, for example, can mean trouble - whether at customs lines or later on. Similarly, one should beware of handling third-party traffic; few countries permit this.

The International Services desk at ARRL hq. has reciprocal-licensing and third-party information on almost every country in the world. We are pleased to help applicants obtain their legal permits.

What can happen if you operate without the legal paper? Almost anything: confiscation of equipment, imprisonment, stiff fines. In the United States, for example, a person operation without a reciprocal permit is in violation of Section 301 of the Communications Act and can be fined up to \$10,000 per day, in addition to a one-year prison term.

Don't gamble: Take the steps, and protect yourself and the Amateur Radio Conference (WARC-79) coming up, we need to keep our records as clean as we can. And every violation overseas counts against us at the conference in Geneva later in 1979.



FCC's FIFTH NOTICE / WARC 79

This has been released, this being Docket 20271 and there are some changes. The full release runs to 275 pages. The ARRL is excerpting the pertinent portions and you can obtain a copy by sending a SASE with 35¢ postage to the Newington headquarters. Deadline for comments on the 5th Notice is August 1st and the Sixth Notice expected later this year is expected to be the final notice.

If you are interested in contributing your comments, you should get the relevant portions from the ARRL. The listings below are mainly the proposals for Region II.

1800-2000khz (1800-1900 exclusive/Reg. 2)	28.0-29.7mhz
3500-4000 (3500-3900 exclusive/Reg. 2)	50 -54 mhz
6950-7250 (B.C moves to 7250-7500)	144-148 mhz
13950-14400	220-225 mhz
20950-21450	420-450 mhz
25760-25850 (Proposed to satisfy 24 mhz need)	1240-1300 mhz

TEN METER DX - An increasing amount of DX on the 10 meter band. Over the recent holiday weekend 9H1CH, F6DZO, ZD8EW and EA7TL were on ten c.w. and EA2MS, CT1LV, KG4AN, and IT9GCQ were on 10 ssb.

YL - SSBers - If you want to meet a multitude of YL-SSBers go to 14332kc any day.

NARROW BANDWIDTHS - A new system for transmitting voice signals in narrow bandwidths. A voice signal with 3000 hertz bandwidth can be transmitted in a bandwidth approaching 1230 hertz. Articles on the system will be published soon in QST. Reports are that the narrowing is obtained with little affect on the quality of the voice.

THE JUNE MEETING of the Oklahoma City Autopatch Association was very informative and educational. Marshall Williams, K5MB discussed various types of antennas for both HF and VHF use. Thanks for a good program Marshall.

NOMINATING COMMITTEE appointed by President. Frank, WB5JBL, is head of the committee. If you wish to serve or to nominate someone give Frank a call.

FOR SALE: AR-22XL Rotator, only six months old, excellent condition, with 100 ft. of 4 conductor cable, \$40.00.
Bob, WB5OBV, 721-898, (evenings.)

FOR SALE: Drake T4XB, - R4B, -MS-4, -PS4-, Mosley 80 - 10 Vertical.

Larry Dillard, 685-4065

From CHEER, June, 1977. Submitted by Frank, W5PDH.

We are the weakest of spendthrifts if we let one friend drop off through inattention, or let one push away another, or if we hold aloof from one for petty jealousy or heedless roughness. Would you throw away a diamond because it pricked you? One good friend is not to be weighed against all the jewels of the earth.-Will Carleton

QCWA Breakfast, At HAM HOLIDAY, 07:30 A.M., August 7, 1977
SOUTHGATE INN, OKLAHOMA CITY, OKLAHOMA.

OKLAHOMA

HAM HOLIDAY

OKLAHOMA CITY

AUGUST

6-7



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◇ TECHNICAL - MOVIES - ENTERTAINMENT

▶ DISPLAYS

▶ CONTESTS

◇ TECHNICAL PROGRAMS

▶ ARRL HOUR

HOLIDAY NOTES: - -

As in the past there will be awards galore (CORA, Inc. is strictly NON-PROFIT, the clubs don't make a dime and neither does anyone else.) - - In addition to their being eligible for the general awards there will be more awards -- just for the gals - - ladies awards - -not radio gear.

As always awards will be made after each program during HAM HOLIDAY with the really big ones going Sunday after lunch. The PRE-REGISTRATION AWARD IS A ONE-TICKET DRAWING. You or your ticket do not have to be present. We will get it to you, someday. All the other awards will require your identification ticket to be presented - so - if something prevents your being present leave the ticket with a friend.

There are a couple of changes from previous years - - If you want Flea Market space you will have to reserve it on a pre-registration slip - - there is one in this issue.

You may eat ala carte in the restaurant at any time, in case you are dieting or can't make the buffet line.

DO IT TODAY - PRE-REGISTER FOR HAM HOLIDAY

POSTMASTER: Send Form 3579 to:
CORA C&E Box 15013
Oklahoma City OK 73115

JULY HAM HAPPENINGS						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					ACARC MEETS 1	2
3	4	MORI MEETS 5	6	7	8	9
10	11	12	13	ALTUS HAM MEETS 14	VHF MEETS 15	16
17	EDIT C&E 18	76ers 19	20	MAIL C&E MORI 21	CORA IMPORTANT MEETING 22	23
24 31	25	26	27	28	29	30

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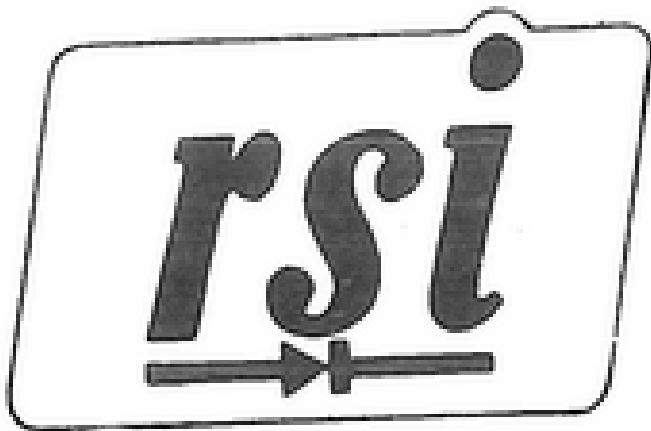
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HEADQUARTERS

ANOTHER NEW A R R L PUBLICATION

LEARNING TO WORK WITH INTEGRATED CIRCUITS \$2.00

THE NEW IC BOOKLET IS A LEARN-BY-DOING SERIES WHICH ORIGINALLY APPEARED IN QST AND HAS BEEN PUBLISHED IN RESPONSE TO POPULAR DEMAND. IT ALLOWS THE READER TO BUILD A DIGITAL VOLTMETER AND FREQUENCY COUNTER AND LEARN ABOUT INTEGRATED CIRCUITS AT THE SAME TIME. LIKE ALL RECENT ADDITIONS TO THE ARRL LINE, IT WILL BE A FAST MOVER AND WE URGE YOU TO COME BY IMMEDIATELY TO GET YOUR COPY.

ONLY \$2.00



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