



HAM HUM

Published by
AK-SAR-BEN RADIO CLUB, INC. - Omaha, Nebr. 68101
Post Office Box 291 - Downtown Station



Vol. XXII
No. 2

February 1972

NEXT MEETING

WHEN: FRIDAY - FEBRUARY 11, 1972

TIME: 8:00 P.M.

WHERE: RED CROSS CHAPTER HOUSE
432 South 39th Street, Omaha

WHAT: TALK ON MEDICAL ELECTRONICS
BY DR. ROBERT A. STRATBUCKER, WØHZE

REFRESHMENTS - EYEBALL QSOs

VISITORS WELCOME

HAM HUM is the official organ of the Ak-Sar-Ben Radio Club, Inc., of Omaha, Nebraska, mailed monthly to all members and to others upon request.



Next copy deadline: February 18th

Published by
AK-SAR-BEN RADIO CLUB, INC.
Post Office Box 291
Omaha, Nebraska 68101
Editor: Dick Eilers, WØYZV
Phone HOME: 391-2255
BUSINESS: 342-1402 - EX. 32
Associate Editor: John Snyder, WØWRT
Phone HOME: 556-1538
BUSINESS: 536-4460
Associate Editor: Ervan Heinz, WAØEEM
Phone HOME: 553-2033
BUSINESS: 553-4700 - EX. 331

SILENT KEY

The Ak-Sar-Ben Radio Club, Inc. mourns the loss of a valuable member, John R. McGovern, KØMSS, who passed away after a brief illness on January 5, 1972 at age 60.

KØMSS, who was called "Mac" by his friends, joined the Club on June 11, 1957. During these fifteen years of Club membership, Mac's work interfered with his regular attendance at meetings. He always made it a point to take time off from work to attend the annual Christmas meeting and managed to put in some time at both Field Day and the annual picnic.

Mac was licensed as a technician in approximately 1956 and was active on 6 meters for many years. He was quite an advocate this last year or so of the 2 meter repeater.

With the heavy exchange of QSL cards during sunspots, he always referred to his card as being made of "mouse fur." Those who were local or visiting Omaha were always invited for an eyeball QSO and his coffee pot was never known to be empty. Everyone Mac came in contact with became his

friend. He did not know how to be unfriendly.

Mac is survived by his wife, Emmaline, who also became an XYL member of our Club on January 1st, 1962. Our deepest sympathy is extended to her.

We will long remember the call KØMSS.



REPORT OF JANUARY MEETING

By Bob Andrus, KØLUG

Happenings of the last Club meeting were more than could be expected from the write-up that was in the last Ham Hum. Those hams who came a little early had the enjoyment of seeing another encounter with the club that thought they had the meeting room the same night we did. Since we did outnumber this group, we persuaded them to use the meeting room upstairs.

Our new president WAØRDZ, Edward F. Askew, opened the meeting in a very fine manner and had the attention of everyone present.

A report by WAØDHU, Bob Lockwood, on the attendance at the Code and Theory Classes was very encouraging and we look forward to a new group of Hams coming up sometime in April.

The program for the evening was the adult version of Show and Tell at which we had very good participation. WØYCP, Jim Droege, was the first to talk on his latest project, that of an amplifier for two meters. Following this in succession was WØRMB, Cecil DeWitt, telling us about his control head for the two meter mobile unit that he has installed in his vehicle. While all this was in progress, WAØEEM, Erv Heinz, was taking pictures around the hall and we will see these in another portion of Ham Hum.

Coming up with something just a little different was our new treasurer, WAØUZX, Charles Kelly, who had one of the nicest finished wood carrying cases we have seen in quite awhile.

Inside the case was a complete antenna for mobile or portable work. Here we all thought he had given up being a ham for going fishing! The highlight of the evening was the talk by WAØEMU, Neal Johnson, on the Fax Machine and how to put one into use on the two meter frequency. Neal is one of those modest fellows who can make a person understand what he is talking about even though we know nothing about the equipment. His description of the tuning lights was fascinating to more than just this person, as we learned after the regular meeting.

WAØVEE, Russ Minks, then presented a transmit-receive automatic switching unit plus an audio oscillator code practice unit that can be used for sending CW. These are two of the better looking pieces of homebrew equipment. KØHRD/WBØFXK, Ned Valder, demonstrated a FM transceiver using a revised CB power pack. Even though manufacturers design this for CB equipment, we can take note that it is adaptable to amateurs' use as well.

After the program coffee and treats were served by WAØVEE, Russ Minks, and even then there were a lot of questions and answers going around the meeting room. The kids are not the only ones to have a good time at Show and Tell! Hi.

MEMBER NOTES

Dear Fellow Hams:

Enclosed is check for my dues for the year 1972.

I enjoy Ham Hum! Hope to be WBØBCB soon. It's about time!

CUL TNX

73,

Edward Eichler, WNØBCB



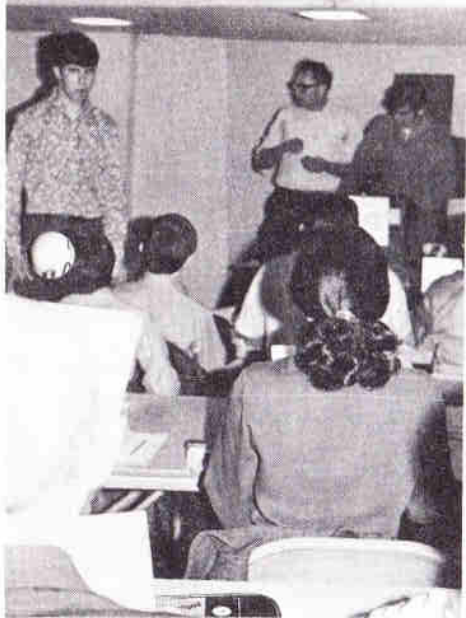
1972 CODE AND THEORY CLASSES

By—Bob Lockwood, WAØDHU

The 1972 Ak-Sar-Ben Radio Club code and theory classes got off to a good start; in fact, much better than expected. When the instructors entered the lecture room at the Chapter House, it was completely packed. The students numbered 120, and of this number, 70 are going for novice privilege.

The instructors include WBØBMV Mike, WBØCLU Jim, WØODL Jack, KØDKM Lloyd, WAØWOT Ray, WBØAJI Brian, WAØWRI Joe, and WAØDHU Bob. Cecil, WØRMB, who has been a real asset in past years, is unable to help instruct classes this year due to illness; however, he said that he will be glad to build demonstrations if





we need them. Bob, WAØZPW, also volunteered to set up demonstrations for the class. His demonstrations will include one on vacuum tubes and one on power supplies.

The schedule was originally set up for separate code and theory classes — one for the beginners and one for the more advanced, with joint showing of films and demonstrations. However, the combined classes were too large and this idea had to be abandoned. Films are shown to the novice group while special demonstrations have been scheduled for the advanced class.

Yes, the code and theory classes are a smashing success and we sincerely hope a good percentage of the students will achieve their goals.

To demonstrate what amateur radio really is, many of the beginners have been invited to visit the shacks of the instructors. It is hoped this personal contact will give them more incentive to become amateurs.

ANY EXTRA NOVICE GEAR???

Since we have such a large group of people going for their novice ticket, it might be a good idea to look through your shack and maybe come up with something novices can use. I am sure they will consider anything pertaining to novice gear — from transceivers, transmitters, receivers, or maybe even some good crystals. Nobody seems to be dropping out of classes at this writing, so there should be a big demand for the gear.

By the way, if only half of these people get their novice ticket and decide to join our Radio Club, our President will have to donate 5 acres for a new place to meet. Hi Hi.

If you have any gear for sale, please contact me or any one of the following: Bob, WAØDHU; Ray, WAØWOT; Jack, WØODL; Mike, WBØBMV; Joe, WAØWRI; Brian, WBØAJI; or Lloyd, KØDKM.

By—Jim, WBØCLU

EASTERN NEBRASKA 10 METER PHONE NET

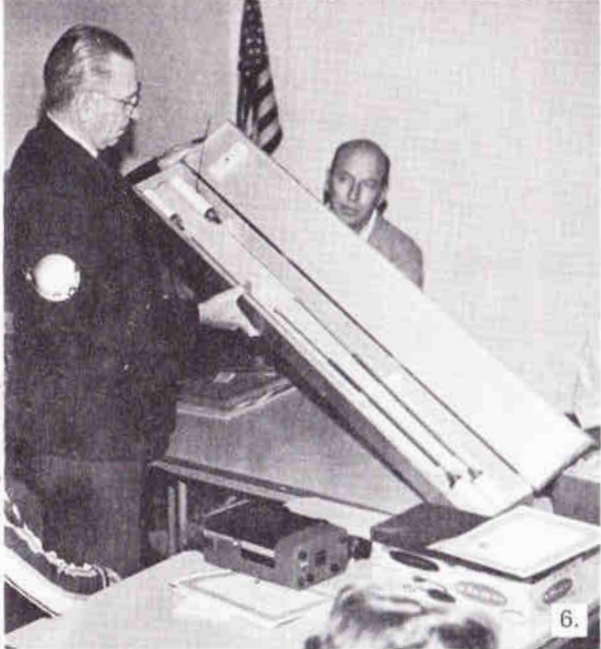
Hi OMs and YLs:

Would like you folks to know that we have a local net that meets each Monday night at 9:00 P.M. local time on 28800 Kc.

This is a good net to get on to meet many nice local hams. Also, you might do some swapping of gear or ideas. Hi Hi.

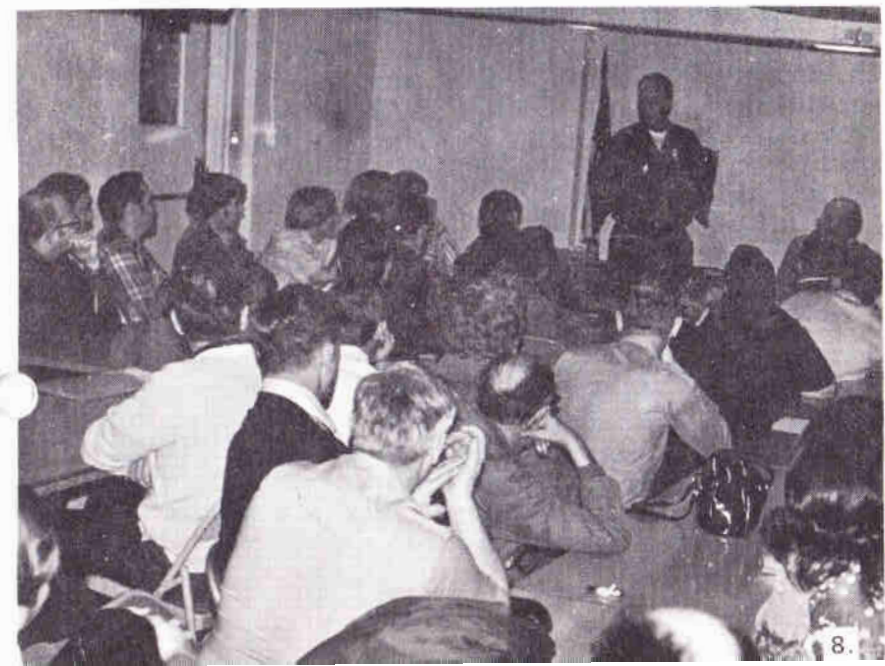
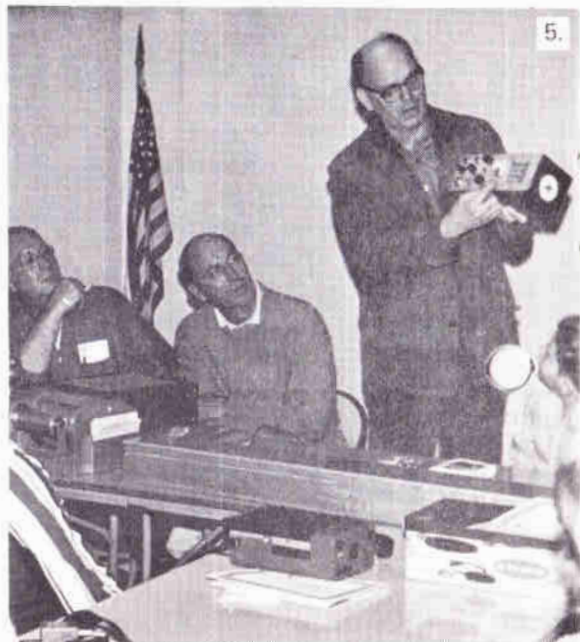
P.S. Just think — no QRM. B C N U soon.

WBØBMV, Mike



SHOW AND TELL PHOTOS

- 1. Program Chairman, Bob Andrus, KØLUG
- 2. " " " " "
- 3. Jim Droege, WØYCP
- 4. Cecil DeWitt, WØRMB
- 5. " " "
- 6. Charles Kelly, WAØUZX
- 7. Neal Johnson, WAØEMU
- 8. Russ Minks, WAØVEE
- 9. Ned Valder, KØHRD/WBØFXK



LET'S SET THE RECORD STRAIGHT

By—Jim Droege, WØYCP

As I heard some chatter on the repeater the other day, some fellows asked the question, "Why do they need money for the repeater when all the equipment is donated?" Just to set the record straight, the repeater cost for the year 1971 was \$450.00. The cost is created by the monthly telephone bills and by replacement parts that are not covered by equipment donations and parts donations, and parts necessary for improvements to the repeater. (See article by WØYSX this issue for example.) So as you can see, the repeater does cost the Club.

Cash donations for the year 1971 were approximately \$100.00. With \$450.00 "out" and \$100.00 "in," the repeater sounds like a losing proposition. Some of the "out" is for changes in equipment that will upgrade the repeater and some for actual maintenance. We have had many equipment and part donations. Unfortunately these donations do not cover all of the parts needed and some must be procured with money. In addition, many of the new members of our club in the past year or two have been the result of the repeater operation.

We will assess the maintenance cost after these improvements have been placed in operation. Purpose of some of these improvements is to lower the maintenance cost but it will still amount to a considerable sum each year.

Donations have already been received in 1972. Our thanks for these

and for previous donations which have helped the repeater stay in operation.

If the urge hits you, donations to the repeater may be sent to:

Repeater Donation
Ak-Sar-Ben Radio Club, Inc.
P.O. Box 291, Downtown
Station
Omaha, Nebraska 68101

SUB FOR STORE BOUGHT GROUND CABLE

In many shacks there is old coax cable. This coax cable can be used for grounding purposes.

Coax cable RG8 or RG11 is equal to DC No. 4 wire, RF No. 0 wire. RG58 or RG59 is equal to DC No. 10, RF No. 6.

Connect the inner wire and outer braid together.

By—Cecil DeWitt, WØRMB

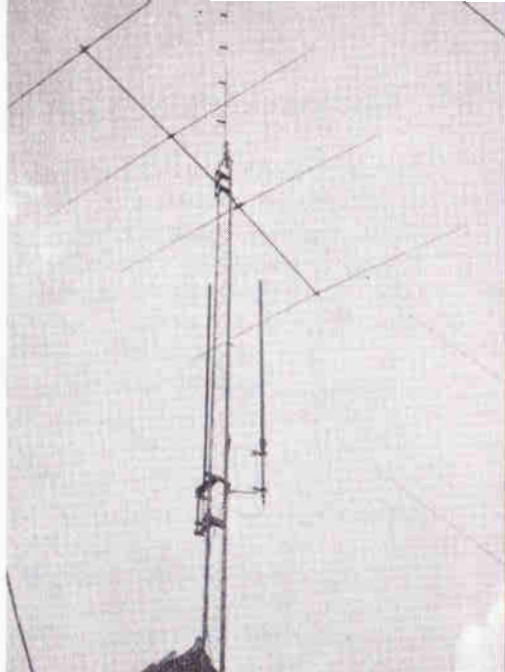
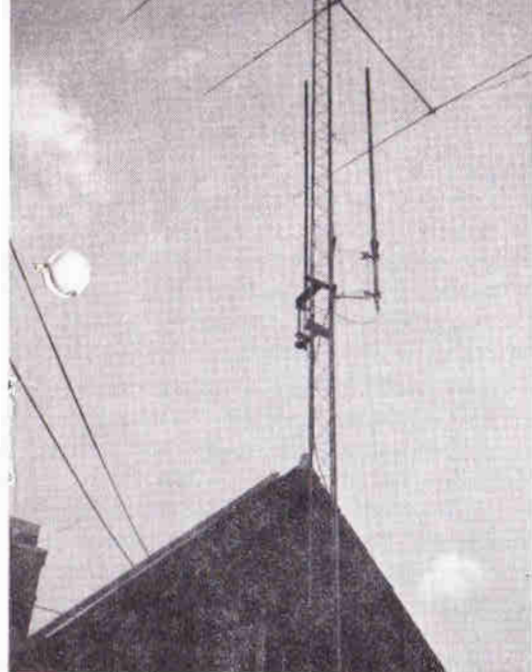
Dick Eilers —

Meeting 1-10-72 at home of WØNVE, Fremont, regarding Lincoln repeater. Present were: WØYCP, KØJIU, WAØDGA, WAØZQX, WØNVE, WAØTTW, WAØMFC, WAØDYO, WØWKP, G3UGH/WØ, WØCHV.

WØYCP explained Omaha repeater setup. Discussion on frequencies of Omaha and Lincoln repeaters. Test to be conducted for 450 Mhz path Lincoln to Omaha for possible remoting 146.34 receiver in Lincoln. Pros and cons of Lincoln staying on .34-.94 or moving to .16-.76 brought up. Much FM talk — a good meeting.

For more info call WØYCP.

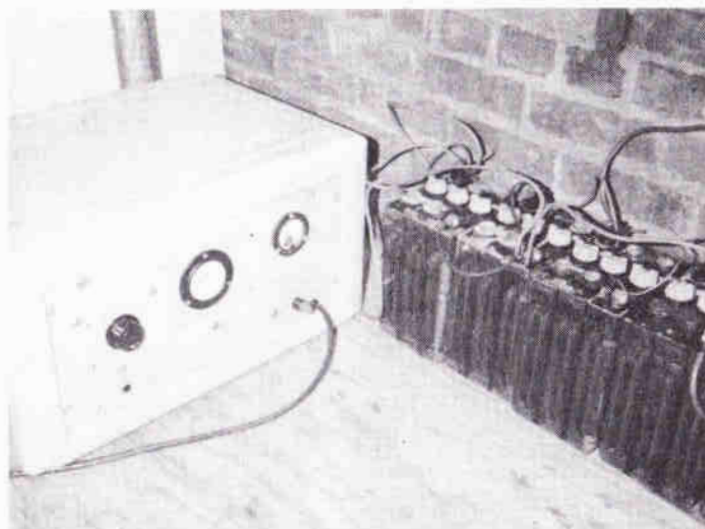
73,
Dick Simonsen, WØCHV



FOUND SOME PICTURES

Recently found some pictures of the repeater batteries and charging system, and the antenna.

WØYCP



ADDRESS CORRECTION

Michael L. McAllister, WNØDXA
1111 North 50th Street
Omaha, Nebraska 68132
Phone: 558-3349

Station KØLUG
January 22, 1972

SCHEDULE OF UPCOMING CLUB MEETINGS DURING THE 1972 SEASON:

- February: Dr. Robert A. Stratbucker, WØHZE,
Talk on Medical Electronics.
- March: Auction Night...Everyone bring some gear to auction off.
- April: Open
- May: Open
Information on upcoming Field Day.
- June: Field Day Activities.
- July: Open
- August: Open
- September: Picnic
- October: Open
- November: Past Presidents' Night.
- December: Annual Meeting and Christmas Party.

Note: All meetings are held on the second Friday of each month at the Red Cross Chapter House, 39th and Dewey Streets, except for Field Day, Picnic, Annual Meeting and Christmas Party.

As information becomes available, we will add to the above list.

KØLUG

RECENT REPEATER CONTRIBUTIONS

Edward F. Askew, WAØRDZ
Lynn A. Blesh, WAØODH
Dick L. Eilers, WØYZV
Frederick Fischer, Jr., WØEGP
Harold F. Jacobs, KØJBC
Charles F. Kelly, WAØUZX
Raymond F. Kydney, WAØWOT
Roy M. McCabe, WØUVU
Mike Wilczynski, WAØBMV

Thanks to the above for the generous contributions. Every dollar counts in keeping the repeater in repair.

ADDITIONS TO ROSTER NEW MEMBERS

Ruth Fleming
XYL of WØBNY
1169 South Street
Blair, Nebraska 68008
Phone: (402) 426-2380

Mildred Prall
XYL of WØODL
623 South 50th Avenue
Omaha, Nebraska 68106
Phone: 558-9921

FOR SALE

Drake L4 linear amplifier, 2000 W PEP. Just returned from factory for updating. New 3-500Z's. Spare parts 3-400Z's. This includes power supply and all cables and manual. \$400.00.

Doug Burghardt, WØWR
Valley, Nebr., Rt. 1
Phone: 359-2302

NEW REPEATER CONTROL UNIT

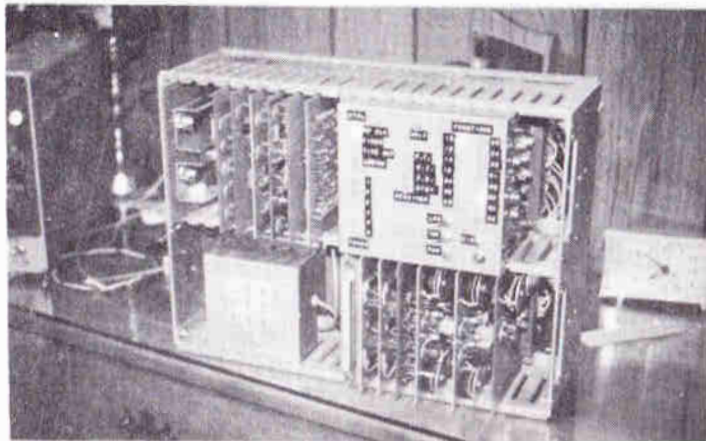
By Bob Schellhorn, WØYSX

This project began when it was thought that the relay chassis of the repeater should be made solid state for smaller space plus reliability. Then came the idea to incorporate the solid state IDeR plus the 440 MHZ control decoders into the same unit. So after a meeting between Jim-WØYCP, Frank-WØGOJ, Stan-WBØBTL, and myself, it was decided to put together a unit that would do the above, plus alleviate the problems in the old unit, plus have some extra features. We have this unit completed and checked out on the bench and hope to install it soon. Some of the features of the control unit follow—

440 CONTROL — One of the drawbacks of the present touch-tone system is that occasionally just talking over the control link or white noise will falsely trigger some functions. This unit has a diode matrix which will trigger on just two tones (which each touch-tone button generates) and no more than two. If three or more tone decoders have outputs, then nothing is

triggered. Also, the new system uses two numbers for each function instead of just one. By using 5 tones (6 buttons), we have available 15 different on/off functions or 30 separate functions. Plus, we can turn a function off without turning off the repeater as in the present system.

CW IDENTIFICATION — The new code diode matrix allows for operating the transmitter at another location, should the need arise. By the flick of a switch, a 'Ø' is added to the WØEQU ID. In addition, there will be no IDs back to back. After the repeater is keyed up and has IDed, a digital clock runs for 3 minutes. If the repeater is not used from 12 seconds after the last ID until 3 minutes after the last ID, then the clock stops and no ID is given. However, if the repeater is used during the above period, it will ID after 3 minutes from the last ID and the timer will start another cycle. This feature allows a station to put out a call, and if unanswered, will only ID the repeater once.



TAPE LOG - Logging is still done during the first 15 seconds after the repeater transmitter is turned on. Then the recorder stops until the transmitter goes off. In addition, when one tape recorder runs out of tape, logging is switched to the standby recorder by a switch-over box (thanks to the Fremont boys). When this happens, a signal is sent to the control unit to lower the frequency of the ID tone to tell everyone that we have switched recorders and to get up to the site and change tape within the next day or so.

RECEIVER SCAN - Up to a year ago, the repeater had only one receiver. During the past year, various combinations of two receivers have been connected in a priority configuration that switches to the aux receiver if the main receiver drops out, then switches back if the main receiver picks up the signal again. The new unit uses a four receiver scanner which will stop on any receiver receiving a signal and key up the repeater. If the signal drops out of this receiver, the scanner will look for another one receiving the signal, and if it does, will stop on it. If none is found, it will scan for a few seconds and drop the repeater transmitter. By the way, you may never know which receiver is in use, due to the same squelch tail on each. This few second adjustable delay is in the control unit and common to all receivers. A control station can not only make any receiver available for use, he can single step the receiver scanner whether it is being used or not, by the touch of a button. He may also disable the scanner and step to one receiver at a time for maintenance checks.

TIME OUT - Like the present system, if the transmitter is kept on for 3 minutes, the time out circuitry will drop the transmitter off. After the input signal drops, the new unit will key up the transmitter for a few seconds, including a one second tone. This will not only tell one station that they have talked too long, but will also let the other station know when the repeater is available for use. In case of an emergency, this time-out feature can be disabled by a control station in order to handle lots of traffic without the bother of the repeater dropping out.

FAIL SAFE COUNTER - This is an automatic shut-down circuit which will prevent the repeater from hanging up. If the repeater is on for a total time of 10 seconds without any input signal, the timer will shut down the repeater. A control station will have to reset it. This would only happen if the control circuitry fails or the IDer doesn't stop after one ID (we know this could never happen, right??). There is a test push button on the control unit for checking this feature.

A few more words and I'll let you get on to the next article. The whole unit is housed in a 36-card rack with 16 pluggable printed circuit cards which should make modifications easier. It operates on 12 volts DC at 1.5 amps max. Contains 3 voltage regulators (one 3.6 and two 5 volts). The front panel has 30 lights to help maintenance know what's going on. The circuitry contains 118 transistors, 21 diodes, and 24 integrated circuits (15 RTL and 9 TTL). With a little luck, we may have this in service by the time you read this.

NEWS FROM FORMER MEMBER

1/18/72

I was surprised at Christmas time to receive a letter from John Ebright, WA7NXP (Ex-WAØQGZ/7) giving a rundown of his activities in 1971. John is a former Club member and thinks of us a lot. I scheduled with him last night and he told me he might

be going through Omaha sometime in March. Said he hopes he can time his visit with the March meeting.

Anyone wishing to speak with him could drop a line to John C. Ebright, WA7NXP, 2606 S.W. 116th Street, Seattle, Washington 98146.

Bob Lockwood, WAØDHU

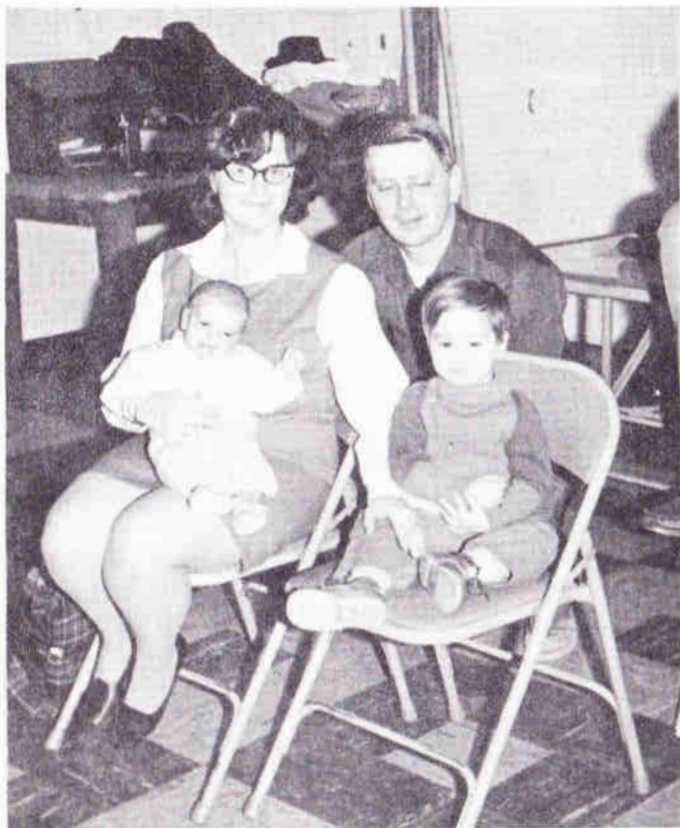


Photo shows members Jim Anderson, KØDNE, and XYL Sharlene and children, Darrin Lyn (18 mos.) and Neil Bradley (2 mos.) at January 14th meeting.

LINCOLN REPEATER GOES .16 - .76

The Lincoln Club has just recently received permission to install their repeater on the 1300 ft. TV tower at Beaver Crossing, and a problem was foreseen if they installed a .34 - .94 repeater at this location. Harry, WØNVE, went to a meeting in Lincoln as the third-party man. The possibility of changing the Lincoln repeater frequency and installing a satellite receiver in Lincoln was discussed.

There was another meeting with the Omaha, Fremont, and Lincoln groups. A decision was made to change the Lincoln repeater frequency, and install a satellite receiver for the Omaha repeater in Lincoln, and another satellite receiver in Fremont for Omaha.

The first step was to see if there was a 450 Mhz. path from Lincoln to Omaha from a building that the boys in Lincoln had secured. A test on Saturday, January 22, proved that there was a path from the building in Lincoln to the transmitter site at the Red Cross. The equipment is being worked on at the present time. The completion date will be on or about February 15, 1972.

It was also decided that the power of WØEQU should be raised to 500 watts output with the new receivers.

One of the fellows in Des Moines said the repeater did not bother them since we moved the transmitter back to the Red Cross. Hopefully, with the satellite receivers, the repeater will be fairly well balanced.

I guess the repeater is improving. With the new solid state control, that appears in another article, and the

additional receivers (IF everything works), it will really be a feather in WØEQU's hat!!!!!!

Jim, WØYCP
Repeater Chairman

FOR SALE

One - Motorola Handitalkie;
AC and DC supplies;
Three - Nicad batteries;
One - Battery Charger. \$100.00

Bob Lockwood, WAØDHU
3711 North 56th Street
Omaha, Nebraska 68104
Phone: 451-7233

CHANGE IN CALL

John L. Cardos, WØNWL (Ex-W4HJV)
3022 Pleasant Drive
Omaha, Nebraska
Phone: 734-2325



"I get about seven miles to a gallon... and my son gets the other twenty."

GUEST EDITORIAL

"Public Interest, Convenience, and Necessity" — all our readers are familiar with these words, which Congress established as a requirement for obtaining any radio station license.

To most Amateurs, the words have come to mean primarily public service. Certainly, emergency communications in a disaster — hurricane, tornado, earthquake or flood — is in the public interest. We can make a good case for services such as MWARS, and for stations that run phone patches to the men in Viet Nam.

Any ham who assumes, however, that activities such as these are automatically going to justify continuation of Amateur Radio and amateur frequencies is badly mistaken. Fees for our licenses have been raised, Ohio increased its charge for Call-letter license plates, the commercial services and the CB'ers are pressuring the FCC for more room — and the general public couldn't care less.

What will happen if the recent interpretation of the rules that would bar amateurs from operations such as the Eye-Bank net, and service to civic organizations such as the Red Cross, is upheld and enforced? Certainly our competition will argue that it makes us less "in the public interest." Also, too many hams who use amateur radio to serve the Red Cross, Civil Defense, and other worthy causes, subordinate their "HAM IDENTITY" to the group being served.

So, let's get busy on our public relations. Amateur Radio itself IS IN THE PUBLIC INTEREST — as any ham knows who has delivered a message from a soldier to his "Mom," or helped a

novice build his first piece of home-brew gear, or listened to a kid talk to his family about his first real DX, or his new friend in Europe, Mexico, or South America.

Two things we MUST do:

1. Take every opportunity to interest non-amateurs in our activities; talk about them — and
2. Whenever amateurs perform a public service, make sure Amateur Radio gets the credit.

By W8GRG in FAA C&E
Collector & Emitter
de Florida Skip

CHEATING CABLE-CHEWERS

Rodents that gnaw on electrical and telephone cable to sharpen and wear down their incisors may soon have to find something else to chew on. Spurred by increasing rodent damage to helicopter cabling, field telephone lines, and other military equipment in Vietnam, researchers have developed a plastic-based coating containing tributyl tin salts that have proven 95 percent effective in extensive field tests. Sprayed on new or in-use cable, the new coating doesn't kill the rodents—they just can't stand the taste.

Service

WATCH OUT FOR THE OTHER GUY

Just being in the right isn't enough. Nearly half the drivers in fatal collisions are in the right. Drive defensively—as if your life depended on it. (It does.)

FEBRUARY HAM HUM ACCESSORIES SPECIALS!!



**SAVE \$5.00 On A W4
DRAKE WATTMETER**
1.8-54 MHz
200 and 2000
watt scales
FOR./REF
High accuracy
136HH042

Reg. \$61.95
\$56⁹⁵



**SAVE 25% On
100 Foot RG8/U
"Foil" Coax
with PL259 Plugs**
100 foot piece of high grade
"Foil" RG8/U-52 ohm
PL259 plug on each end.
69HH039 - \$13.95

\$13⁹⁵

SAVE 40%

BATTERY METER

Finely calibrated to show condition of car battery. Plug in-to cig. lighter for test.



5HH001 - SALE - \$2.95

\$2⁹⁵



**PR 80M
Novice Crystals**

Save 10% on Four

We have a good selection of PR Z9C ham crystals between 3700/3750 kHz.

Singly \$2.95 or
Four for \$10.50

Four **\$10⁵⁰**
For

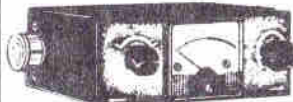


**SAVE
OVER
50%**

**ASTATIC 521
Ceramic PTT
Handmike**

53HH110 - \$4.85

2 KW SWR BRIDGE Top Value at



\$9⁹⁵

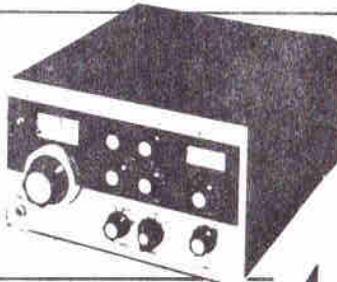
Forward/Reflected SWR Readings. 80/2 Meters.
99HH271 - \$9.95

See The Great New
**GALAXY GT550A
Ham Transceiver**

Now Reduced
To

\$495⁰⁰

A real "Powerhouse" on 80/10 meter SSB/CW, fixed or mobile! 550 watts on SSB, 360 watts CW. Ultra stable VFO, sharp filter and many deluxe features. See it - hear it in our (Council Bluffs) store. 66HH049 - \$495.00



Mail Order Only At Our
Council Bluffs Store
Minimum Order by Mail \$10.00
Equipment Available on

CASH

master charge
THE INTERSTATE CARD

BANKAMERICARD



WORLD RADIO

3415 West Broadway • Council Bluffs, Iowa 51501

Phone: (712) 328-1851