



HAM HUM



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Vol. XV
No. 6

June 1965

JUNE MEETING

The next meeting of the Ak-Sar-Ben Radio Club, Inc. will be held in the Auditorium of the General Motors Training Center, 225 North 80th Street, Omaha, at 8:00 P.M. on June 11th.

Royal M. Enders, KØLYO, will give us up to date information about electronic ignition, both all transistor and transistorized, including its effect on economy, performance, and periodic maintenance service. He and his helpers will also discuss radio reception interference originating in the automotive electrical system and the effect of electronic ignition and electronic generator regulators on this interference.

IOWA DAYLIGHT SAVING

WRL store hours during Daylight Saving Time, from May 29 to Labor Day inclusive, as follows:
Monday 8:30 A.M. - 8:30 P.M. DST
Tuesday
rough
Friday 8:30 A.M. - 5:30 P.M. DST
Saturday 8:30 A.M. - 1:30 P.M. DST

AL, WØJJK

JULY MEETING

A visitor at our July 9th meeting will be Lewis G. McCoy, W1ICP, of the ARRL Headquarters staff. Mac will talk to us on antennas and transmission lines; he also has a very interesting talk on "How To Succeed In Amateur Radio Without Really Trying"; plus a discussion of ARRL in general and he will be available for any questions you have regarding ARRL Headquarters operations.

The meeting will be held at the 4-H Building, Ak-Sar-Ben Field, at 8:00 P.M. on July 9th. Make a SPECIAL NOTE so you WILL NOT MISS this program.

We are also inviting members of the radio clubs in the surrounding area to attend this meeting as we feel a number of them will be interested. Please spread the word to your friends and invite them to attend. Guests will be more than 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.



FOR SALE

National NC-155 with speaker. A-1 Condition. Price \$70.00 Contact:

Leslie C. Hindman, Jr., KØHPJ
5021 Burt Street
Omaha, Nebraska 68132
Phone: 551-5545

AREC NEBRASKA

Sarpy County AREC - 6 meter net 50.478 Mc. - 7:00 P.M. - Sunday
Acting NCS - WAØEHH

Sarpy County CD net - 50.550 Mc. - 8:00 P.M. - Monday
Acting NCS - WAØLLQ

Sarpy County AREC - 2 meter net 145.350 Mc. - 9:00 P.M. - Thursday
Acting NCS WØWRT

The Nebraska AREC 3982 Kc. emergency net was called into action twice recently, once for the forest fire at Halsey, and because of the tornado at Primrose. Many amateurs responded throughout the State and AREC mobile and portable units were established at the disaster sites handling traffic directly into the State CD headquarter station-KØHPT, located at underground center in Lincoln.

In event of any future emer-

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Editor: Dick Eilers, WØYZV

Phone HOME: 391-2255
BUSINESS: 342-1402 - EX.

Associate Editor: John Snyder, WØWR

Phone HOME: 556-1538
BUSINESS: 551-0669 - EX. 317

NEWS ITEM

Steve Lustgarten (ex-WNØJES) has passed his general and works 40-10 meters CW & AM. His call is WAØJES. He uses a Ranger I and a HQ-129-X.

gency those of you who are available please check the frequency 3982 Kc. and LISTEN, BUT DON'T TRANSMIT. Should a station be needed in your locality it will be called for by the NCS. Any station will be more valuable for emergency purposes if an emergency generator portable antenna are available.

Larry L. Abbott,
KØJXN/WØHYD,
Neb. SEC

EMERGENCY COMMUNICATION TEAM

The Emergency Communication Team, with its base station at the Headquarters of the Douglas-Sarpy County Red Cross, will provide communications for communities in the surrounding area where needed in emergencies. This Team can be called out by a responsible official in the community needing the communications, by the Red Cross, and by the State Civil Defense, and will make use of 6 meters and 75 meters. The 6 meters are to be used by local communications, particularly with mobile units and generator powered portable base stations. The 75 meters are to be used for longer haul message handling, tying into the AREC nets and for direct con-

tact with State Civil Defense office, Red Cross Headquarters in Omaha, and the local Civil Defense.

We have had two meetings thus far, the first a dry run at Elkhorn for a simulated emergency using 5 mobiles on 6 meters along with a portable base station at the Fire Department in Elkhorn, and using 75 meter SSB for communications back to Omaha. The second meeting was held at the Red Cross Headquarters for the purpose of discussing methods, message handling, etc.

The two photos shown with this article are of the group looking over maps of the area and examining the new trailer mounted generator which has been fitted out with 75

Photos

by

KOMSS



May 13, 1965

meter antennas and 6 meter ground plane as well as flood lights. This small group is only the nucleus of the team. We are recruiting additional members. If you are interested in emergency communications, particularly in preparedness for emergency communications, we are interested in you. We need you whether you have mobile equipment or not as it requires three men to run each station - an operator, a logger, and a public relations man. This Team will handle communications on a very businesslike basis, transmitting written messages prepared in regular message form and signed by responsible people in the communities. In available time we will, of course, handle the usual routine messages that develop in an emergency. The contact man for this Team in our Club is Fred Fischer, Jr., WØEGP. We can use your help. Please call him at 391-4193 or indicate your desires on the card enclosed with this issue and return to Ham Hum.

ANNUAL STEAK FRY

Central Nebraska Amateur Radio Club, July 25, 1965 - Victoria Springs State Park near Anselmo.

Send registration fee of 50¢ per person, maximum of \$2.50 per family before July 11, 1965, to: club secretary Harry Roblyer, WØDLM

Box 492

Burwell, Nebraska

Steaks, pop, coffee - furnished by the club. Club station WAØGXL will be on 3960 Kcs.

Editor Ham Hum,

It's 2400 and too late for me.

Recently I visited WAØBID/BIE. During the visit I glanced at their clock. It read 2036. I was really interested in knowing what time it was so I asked Vi. Happily she referred me to her daughter who was involved in some new type of mathematics in school. She could tell me.

It didn't take long for Janice to tell me the time. Being a bit curious I asked her how she did this off the top of her head. "It is simple," she replied. "Just subtract 2 from 20, giving 18." "Drop the 1 and it is 8:32 P.M." This sounded good but the 2036 on the clock face still bore no relationship to 8:32 P.M.

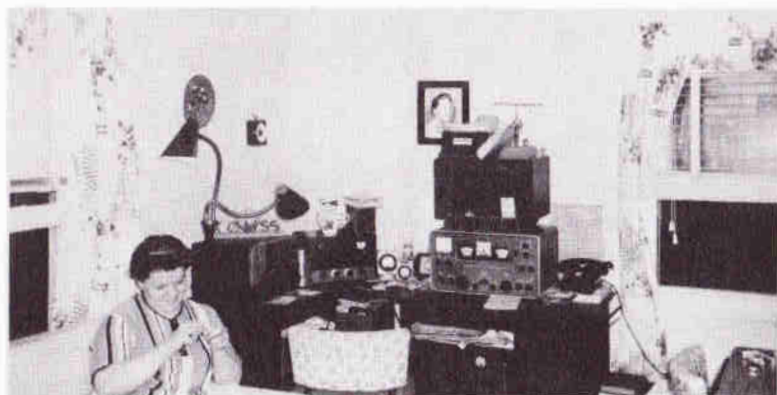
I asked for a repeat of the explanation, trying not to show my ignorance too much. The third time through I confessed I did grasp the 8:00 P.M. bit, but not the 32.

"Oh" she replied, "Our clock is just 4 minutes fast."

WØPHW

WESTERN ELECTRIC TRIP

Members of the Ak-Sar-Ben Radio Club, Inc. appreciate very much the invitation and trip through the Western Electric plant arranged by OMARC, the Western Electric Amateur Radio Club. Our special thanks to Fred E. Kujawa, KØETA, who assisted in making these arrangements. Those in attendance certainly enjoyed the trip.



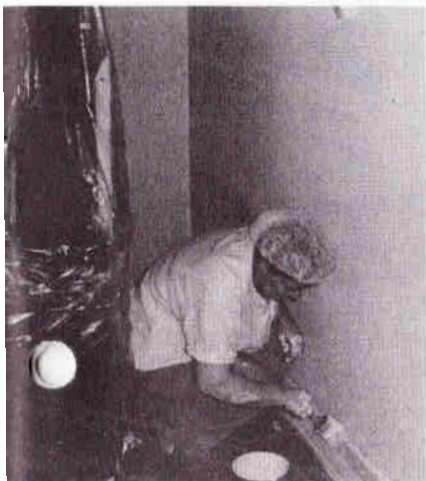
HAM OF THE MONTH

These pictures show the ham shack and antenna of KØMSS, Mac McGovern. Since Mac took the pictures he is not sitting in the operating position. The reason for the pictures at this time is that the ham shack is newly decorated. In fact, one of the pictures shows XYL Emmaline wielding a paint brush.

In the shack you will notice the main rig is a Johnson 6N2

powered by a Ranger and a brand new hearing aid HQ179A-VHF. Mac also dabbles in SSB on 6.

One thing not shown in the photo is the coffee pot. The coffee is always hot and ready at the QTH of KØMSS. In fact, the photo shows the Maxwell House can as a paint can. We will all be over to see you and Emmaline and sample that good cup of coffee or that cup of good coffee whichever way it is.



NOISE, AND HOW TO FIGHT IT

By W3MFY, Pres Funk

Although electrical manufacturers do consider noise in the design of their products and adopt every available means to suppress it, electrical equipment does age and develops troubles, which inevitably lead to noise production. No receiver, TV or radio on earth is completely noise free - yet, what counts in any RF receiving set-up is the amount of usable signal in proportion to the amount of unwanted noise. In other words, if our wanted signal is stronger than our unwanted noise, we communicators will seldom have too much trouble. A high signal to noise ratio is hard enough to achieve with modern techniques, let alone trying to combat noise produced by malfunctioning electrical equipment.

The following do produce noise when not functioning properly; neon lamps and signs; heating pads; electric motors of all kinds; kitchen appliances (toasters, broilers, mixers, etc.) house wiring, both internal and external; oil burners; ignition systems, power company transformers installations; shop equipment of all kinds, including arc welding equipment; high tension power line corona; poor or very loose ground connections; defective switches and relays of all types; defective tubes (especially those whose elements become shorted); internal meter arcing; improperly shielded and/or suppressed TV

receiver oscillators; diathermy equipment; X-Ray equipment; refrigerators of all kinds; antenna installations (at the receiving station or nearby) and small components such as resistors, capacitors, coils, diodes, etc. Noise is conducted, radiated, or both. It can travel through a complicated wiring system. Sporadic or steady noise can be specific in frequency or it can be aperiodic (having no discernible single frequency characteristic). Often the type of noise sound heard via a good receiver will enable one to determine roughly what may be causing it. For example; we all know how noise caused by an automobile ignition system sounds. When the car engine is idling we hear a distinctive "puck, puck puck," as the engine speeds up, our puck's increase in number. The only really effective way to eliminate ignition noise is at the source. Of course those of us who have noise limiting circuitry in our receivers are able to attenuate the "pucks" to where they are not annoying. Noise from electrical motors is usually characterized by a high pitched whine. This is also true of generators. Neon lamps and other high voltage devices will usually radiate a noise that is characterized by its "hash" or periodic type sound. Again, suppression is only effective right at the source.

A defective (pole pig) power

line pole transformer will usually create a combination of sounds from a distant crackle to a high frequency type hash. The noise is much stronger in wet or very humid weather. If loose connections are not the cause, nor can the trouble be pinpointed to an internal leak, replacement may be indicated.

Diathermy and X-Ray equipment are trouble makers when not operating properly. The former throws out a "good" RF type of noise which usually does have a specific frequency, while the latter sounds like an old spark transmitter - its signal is full of harmonics and hash.

Vacuum cleaners are the bane of most Saturday morning contacts. Locating this offender is not difficult because it makes a mechanical, as well as an electrical noise. The most effective cure is to connect two .1 mfd capacitors in series and put the combination directly across the brushes of the motor. The center tap of the two condensers is connected to the vacuum cleaner frame. If this method does not work it may be necessary to install a brute force filter consisting of two coils in series with each line (leaving the condensers already connected) and then connect a like combination on the point side of the coils.

The location of a noise producing source is not always a simple matter. This is why such companies as Stoddard Aircraft Radio Co., Inc. of Hollywood, California and the Sprague Electric Co. of North Adams,

Mass. (among others) specialize in the production of interference location and measuring equipment. It must be remembered that an interference that will effect low frequency reception may not have any effect on frequencies at very, or ultra, high frequencies and vice versa. This is the main reason why much interference location equipment has been designed to cover a very wide range of frequencies.

You can make up your own "interference locator" by using a portable radio receiver and a directional antenna; both of which must be capable of covering frequency wise, the bands in which you are interested. Now, with HF transistorized receivers on the market, these can be used very effectively in many cases to locate noise produced by nearly any electrical device. Here is another thing to remember; most electric power and telephone companies, in nearly every city in America, have a special "interference location section." If you have a noise which may be caused by telephone or power system, contact them for assistance. By using instruments, like those described here, their technicians can quickly locate the trouble and correct it. If you are not familiar with an appliance (refrigerator, sewing machine, mixers, stoves, neon assemblies, etc.) and its noise producer, it is better to call an experienced service man (affiliated with the company that manufactured the appliance).

Most noise can be filtered or

shielded out of any electrical device AT THE DEVICE, using a brute force filter at a receiver is not often too effective but will help in many cases. Choosing the correct filter and/or shielding often requires the services of an expert, for it is very possible to affect the efficiency of a device by using wrong corrective measures. Some causes of noise and/or interference are very simple and can be corrected simply. For example; a radio taxi dispatcher, in one of our large cities, was continually experiencing a nerve wracking noise which opened the station's receiver squelch. No matter how he tried to adjust it, he could not cut out the interference with the squelch control without over de-sensitizing the receiver. A little investigation disclosed that one cab contained a mike with a defective switch that closed and opened intermittently as the cab bounced around the city.

Most noise problems can be solved easily and quickly---IF THEIR CAUSE CAN BE TRACED.

73 and good hunting,
W3MFY
de Pack Rats
Philadelphia, Pa.

Hi OM's and XYL's,

Elmer put his new antenna up at our new QTH. We are now located at: 4319 Miami St.

We are using a 40 meter folded dipole long wire antenna. We will be on 40 meter CW most of the time.

73's, Ella Andersen,
XYL of WQPZB

"CANTENNA" MODIFICATION

My Heathkit "Cantenna" seems subject to oil creepage around the lid. In addition to looking messy it collects dirt.

To fix it - cut the top 1-1/2 inches from a 3-pound coffee can. Use the type with the plastic lid. Press this top portion of the coffee can into the grooves of the "cantenna" lid. Connect an angle coax fitting pointing upward. Replace the plastic lid when not in use. Or cut a hole in the plastic lid to pass the coax and use with the plastic lid on.

The "cantenna" will be neat and clean. WØPHW

OFFICIAL BULLETIN NR 4 FROM ARRL HEADQUARTERS NEWINGTON CONN MAY 6 1965 TO ALL RADIO AMATEURS \overline{BT}

It has been called to the attention of Project Oscar that the 145.95 Mc. coherent beacon has been heard at times, very weakly. Project Oscar urges that all interested amateurs monitor this frequency and report reception of the beacon. It is very important that it be established if this beacon is operating, and to note the type of emission, keying, or other characteristic of the signal. Please report reception of the coherent beacon, with all data, at once to Project Oscar, Foothill College, Los Altos Hills, California. The latest sequences of orbital predictions will be mailed from the Oscar Project on request with a self-addressed stamped envelope \overline{AR}

June 7, 1965

Dear Gang:

I finally got down to the cellar to develop that old roll of film. I found some pictures of the new addition here at the shack.

Way back about a month ago we got up enough of that stuff it takes to put a 2 element quad before the neighbors' eyes. Our masterpiece?...is all homebrew. Got the fishing poles at a sporting goods store and made the spiders out of 1/8" x 12 x 12 aluminum plate, picked

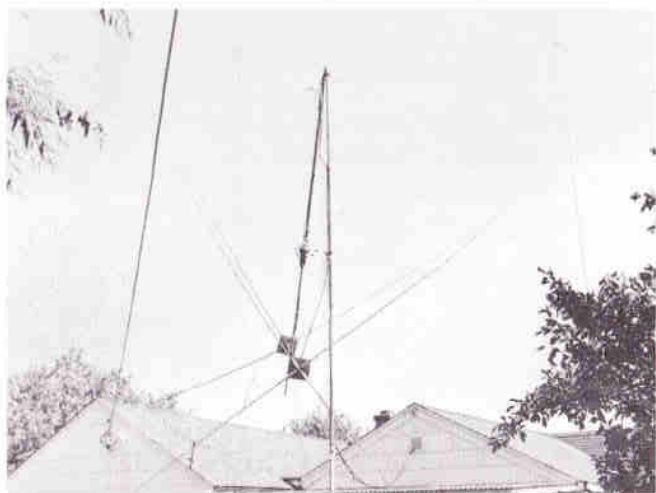
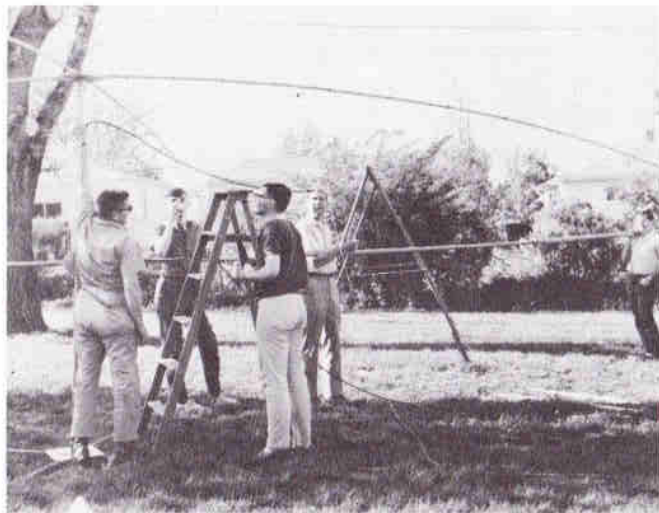
up some wire and away we went.

The first picture is when we were finishing the construction of it. From the left is my dad, WAØGQG, KØCVA, WAØGED, and WAØGQH.

The second picture is . . well, I'm glad I wasn't on top of it. I guess I goofed on a guy wire. Anyway she is back up in better shape than to begin with, and it works better too!

73's

Roger Sullivan
WAØETE



FIELD DAY - JUNE 26-27

Frank Fernald, WØBTE, Field Day Chairman for the Ak-Sar-Ben Radio Club, Inc., is putting the final touches on plans for a real Field Day outing.

THE PLACE: THE LATENSER ESTATE (same place as last year). Go north on 30th Street, take the road to Blair, and go to the intersection of County Road No. 7. Turn right and follow the signs.

THE TIME: Set up starts Friday evening, but the big job of set up will be Saturday morning, June 26th. Operations will start at about 1600 Hours Saturday and continue for 24 hours. Standard ARRL Rules will apply for station multipliers and operating procedures. All operators must show FCC Ticket (not a photostat) in order to operate; all transmitters will operate under WØEQU. Each operator will be given a copy of the Official Rules.

If you have not already been contacted, we would like your help. Please call Frank Fernald, WØBTE: Home phone, 733-8052; Business phone, 341-8069. If you find that you can help even though you haven't signed up, come out anyway. We can undoubtedly use you.

**OFFICIAL BULLETIN NR 5
FROM ARRL HEADQUARTERS
NEWINGTON CONN MAY 13, 1965
TO ALL RADIO AMATEURS BT**

All amateurs located in the ARRL field organization, individuals as well as clubs and groups, are invited to participate in the

annual Field Day June 26 and 27. This annual exercise of emergency powered equipment is the ideal time to test gear such as generators, batteries, mobiles, portable rigs, easy to assemble antennas, etc. Convenient log forms and summary sheets are now available on request from the ARRL Communications Department, 225 Main Street, Newington Connecticut 06111. Official rules for the Field Day will appear in June QST AR

from-- **THE SACRAMENTO BEE --**
Thursday March 25, 1965

A disaster command communications network has been arranged by the California Highway Patrol for the use of United States Air Force Military Affiliate Radio System (MARS) radio frequencies during natural disasters which result in civil emergencies.

Announced by Colonel David S. Woods, Air Force communications service western region commander at Hamilton Air Force Base, the arrangement is said to be the first made between MARS and state civil authorities anywhere in the country.

R. J. Maxwell, emergency planning officer for the highway patrol, said the use of MARS frequencies during the recent North California floods could have saved the state \$1,200 in telephone bills.

MARS frequencies are used by the Air Force in supplement regular

systems in what is termed "the event of failure" of communications. Their use during emergencies, Woods said, will depend on "current military commitments to the national defense."

de Pomona California

Ak-Sar-Ben Radio Club, Inc.
P. O. Box 291
Omaha, Nebraska

Greetings from "6" land.

Here is my \$1.00 donation for Ham Hum. Please note the change of address.

We're just getting settled out here with IBM. Right now learning to program their new 1800 process control system - everything is fantastic. Transistors the size of a grain of salt, etc. The old think tank is really spinning.

If you're interested, perhaps next time in town we can bring a flick on the stuff and say a few words at a meeting.

We're set up on VHF and activity is pretty hot - more repeaters than you can shake a stick at. Working on the kw agn and should be on the low bands before long.

Looks like the XYL (WB6JXN) will be presenting us with a Jr. Op. this fall.

73,
Mike Trimble
KØAVB/6
628 Blom Dr.
San Jose, Cal.

P.S. You're pulling my leg about WØVLI trading cars!!

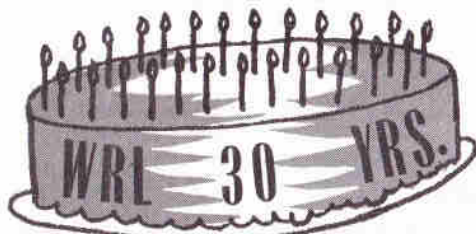
The Omaha area has many nets, and one of these, a rather new net is on Sunday nights at 19:00 CST on 50.478 Mc. It is the *Sarpy Co. AREC Net*. However, since I took over the net, there has been a decline in check-ins. The reason for this I would like to know, so that I may make adjustments to suit all. There are many members of AREC on 6m. I'd like to hear from them. I would like to make the best of this net. Please help me to do so. If you aren't a member and wish to join, write me for necessary application blanks, etc. All are welcome to the net. PLEASE, especially members, check in.

73s and trx.

Tony Martinkus, WAØFHH
6244 South 36th
Omaha, Nebr. 68107

**OFFICIAL BULLETIN NR 7 FROM
ARRL HEADQUARTERS NEWINGTON
CONN JUNE 2 1965 TO ALL RADIO
AMATEURS BT**

An exceptional opportunity for DX on 432 Mc. will be available on July 3 and 24. On these two dates the 1000 foot reflector at Arecibo, Puerto Rico, will be fired up by KP4BPZ, and used for amateur moonbounce communication for the total time that the moon is within range, just over 2 hours. The July 3 test will start at 1942 GMT with a two minute C.W. CQ from KP4BPZ on 432.000 Mc. It is suggested that replies be made between 432.01 and 432.1 Mc. Tests will also be made on s.s.b., lower sideband. The July 24 test will start at 1110 GMT. More details will appear in July QST AR



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