



HAM HUM

Published by
AK-SAR-BEN RADIO CLUB, INC. - Omaha 1, Nebr.
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Vol. XIV
No. 11

December 1964

Christmas Party

The annual meeting of the Ak-Sar-Ben Radio Club, Inc. will be held at 8:00 P.M. on December 11th, in the Cafeteria of the World Insurance Company, 203 South 18th Street. In addition to the election of officers we will have a Christmas party for members, their families, and guests.

Each member is requested to bring a gift of a dollar value for exchange with another member. In addition the Club will provide such other Christmas gifts as can be procured which will be added to the stack of gifts so that each member may have one or more gifts. Guests may also bring gifts for exchange if they like. There will be a special drawing of a gift for guests only, as well as a special drawing of a gift for XYLs and some special treats for the children.

Entertainment will please both *g*uests and youngsters, we are *g*lad. Our own Fred Crouter, WAØGNT, who is both a magician and ventriloquist will perform with "Jim." In addition, Miss Nancy Kay who is an outstanding accordianist will provide the music.

The XYLs will furnish some good homemade cake and we will also have ice cream, coffee and/or pop for refreshments.

Mark the date on your calendar now - December 11th - we know you will enjoy the party and your children will be delighted with the entertainment and to greet Santa Claus.

Omaha, Nebr.

The newly organized Sarpy County 2 meter AREC Net will meet each Wednesday night at 9 P.M. NCS is Larry, WØHYD. Frequency is 145.35 mc. (Use an 8075 kc. rock) The state of the art is such now that we should be able to make this net a success. Whether it is or not will depend on the amount of interest by the fellows in Douglas and Sarpy Counties.

Please give Larry your support.
tnx. WØWRT

KØKWB is now on the air with Galaxy 5. DX on 15 meters is real good 0900 to 1500. Have worked KM6B1 Reg.

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.



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FROM THE PRESIDENT

TO ALL MY FELLOW MEMBERS OF THE AKSAR-BEN RADIO CLUB, INC.

WITH the month of November finished, the end of my full year as your President of the Ak-Sar-Ben Radio Club, Inc., may I take this means of expressing my appreciation of your esteem and confidence while holding this office.

During this year, your Club has been supported and operated by a Board of Trustees, of which their guidance has been invaluable. As you know, your Board of Trustees has always tried to represent the Club members as well as the members who elected me, in such a way that most of your wishes, desires and worthwhile suggestions for the good of the Club would be given due consideration.

The Board of Trustees are to be commended most highly for the fine job they have performed this past year. I personally wish to extend my thanks to them as a Board and as individuals.

To those that have contributed to the Club activities, which include

the Fund Drives, Picnic, Field Day and Programs through the months of 1964, I would also like to grasp their hand and say a job "Well Done." Let us hope that this support will continue to the man that follows as President.

The opportunity to represent the members as your President for this past year has been greatly gratifying to me. It has been an experience I shall not forget. My special thanks to all of the "XYL'S" that have contributed so much to the activities and are so often forgotten.

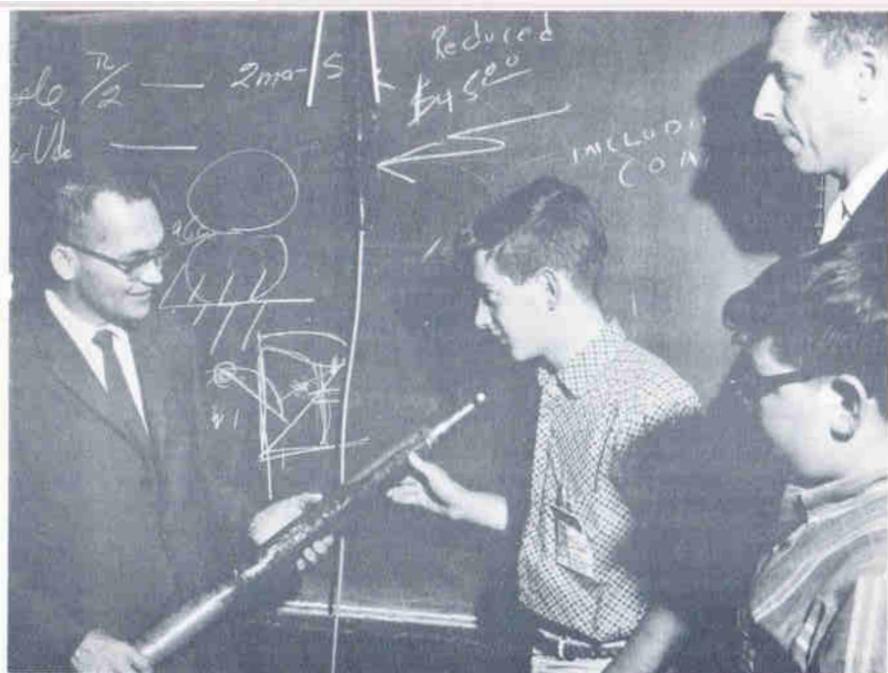
73,

Lou Cutler, WØVLI

Maurice Costello, KOYWY, missed out on the monthly drawing of \$6.00 because he was not at the meeting on November 13th. amount next time will be \$7.00.

Harry Silver, WAODJK, won the raffle prize. I'm sure the nice soldering iron will come in handy.

Ed Donze, WØYEV



Bob Ruyle, WØFCH

NOVEMBER MEETING

Once again our sincere thanks to Bob Ruyle, WØFCH, of Hy-Gain Antenna Products Corp., Lincoln, for his excellent talk at our November meeting.

The photo above, shows Bob giving the dope to Harry Silver as to how you can burn up an antenna with 43 kilowatts by merely changing the guy wires. Incidentally, the sign on the blackboard "Reduced \$45.00" refers to John Orr's antenna rather than to any of the Hy-Gain products. This is the one he recently purchased at the auction and has been improved upon. John will no doubt go into business in competition with Hy-Gain shortly.

Several of you mentioned to Bob Ruyle that you would be interested in again having information regarding grounds. He, therefore,

sent a copy of the talk he gave us the first part of the year. You will find it printed elsewhere in this issue.

(Photos by Erv Heinz, WAØEEM)



NOMINATIONS FOR 1965

The annual meeting of the Ak-Sar-Ben Radio Club, Inc. will be held the second Friday in December, and its main purpose is to elect new officers for the following year.

Our Articles of Incorporation and Bylaws provide for the election of a president, vice president, and four members of the Executive Council each year. The president and vice president are elected for a one-year term. The Executive Council members are elected for a two-year term. The president remains on the Board of Trustees as the immediate past president for one additional year.

This means that four members of the Executive Council and the immediate past president remain on

the Board of Trustees for one more year and they, together with the six new ones, constitute the eleven man Board for the operation of our Club.

A nominating committee is appointed each year by the president, said nominating committee composed of the president and two past presidents. This nominating committee is to nominate the officers and members of the Executive Council to be elected at the next annual meeting.

At the meeting on December 11, 1964 the nominating committee will place in nomination the following, and we give you a brief write-up of each.

For President

Edmond E. Donze, WØYEV (presently Board member and Treasurer of the Club)

Age: 54
Address: 2926 South 21st Street
Phone: 346-6867
Wife: Maxine
Children: Daughter, Barbara; Son, Fred (both married)
Employment: Carpenter (self-employed)
License: General - 9 years
Hobbies: All aspects of radio, hunting, fishing

For Vice President

Frederick Fischer, Jr., WØEGP (presently Board member of the Club)

Age: 39
Address: 836 South 88th Street
Phone: 391-4193
Wife: Audrey
Children: Son Kurt, age 12
Employment: Quaker Oats Company
License: General - 16 years
Hobbies: Ham Radio, Sports Car enthusiast, reading

For the Executive Council

Ray O. Dappert, Jr., KØKQK

Age: 35

Address: 9804 Grover Street

Phone: 391-6234

Wife: Carita

Children: Daughter Barbara, age 7

Employment: Metropolitan Utilities District

License: General - 7 years

Hobbies: Ham Radio, mountain climbing, hiking, Hi-Fi

Frank Fernald, WØBTE

Age: 29

Address: 2306 Myrtle Street

Phone: 733-8052

Wife: Jayne

Children: Susan, age 8; Connie, age 7; Frank, Jr., age 4; Donnie, age 3

Employment: President, General Communications Co., Inc.

License: General - 10 years

Hobbies: Hamming, flying, boating, hunting

Alvin H. Hofgaard, KØTUS

Age: 53

Address: 4645 Browne Street

Phone: 455-3425

Wife: Florence

Children: Jerry, age 19 (at Dana College); daughter, Judy (married)

Employment: Omaha World-Herald

License: General - 4 years

Hobbies: Ham Radio

Fred E. Kujawa, KØETA

Age: 42

Address: 7605 Grover Street

Phone: 393-1244

Wife: Diane

Children: Kathleen, age 10; James, age 9; Tom, age 7; Paul, age 6

Employment: Supervisor, Western Electric Company

License: General - 4 years

Hobbies: Ham Radio, organ, photography, astronomy, fishing, Hi-Fi

The five remaining on the Board are:

Louis A. Cutler, WØVLI

Alan H. McMillan, WØJJK

Edmond E. Donze, WØYEV

John W. Orr, WØPHW

Dick L. Eilers, WØYZV

Should Edmond E. Donze, WØYEV, be elected President this will create a vacancy on the Executive Council. The Board will then select a member to replace him, and the selection will be presented to the members for approval at the next meeting.

Should Frederick Fischer, WØEGP, be elected Vice President it will not interfere with the number of required Board members as he reaches the end of his present term with the December meeting.

November 25, 1964

WOULD YOU HELP?????

THE INTERCONTINENTAL TRAFFIC NET meets daily at 7:00 A.M., Omaha time, on 14330 kc's. Omaha maintains a MEDICAL ADVISORY SERVICE in conjunction with this net. We need operators who would take one day every ten days or so and check into this net for the Omaha doctors. Normally this takes only five minutes as there is little traffic. When traffic does come in it is *urgent, vital* and *extremely interesting*.

WHAT'S NEEDED?????

...A Single Side Band rig with considerable power,

...A directional array that can lay a decent signal into South America, and

...A phone patch.

If you can help, would you call Dick Cunningham, 391-3710, or Fred Fischer, 391-4193.

73's

Hugh Tinley KØGHK

NOTE FROM PALO ALTO

I have just returned from my time in the hospital, so that will somewhat account for my delay in replying. I'm on the mend now, if I make it - I will have been off just four weeks. One disappointment though, I had planned to spend some time on the air, but the anesthetic knocked out my voice, it is just now returning. Imagine a "quiet Edgerton!"

Just before entering the hospital, there was a Regional Amateur Radio Convention in Sacramento which I had planned to attend. The necessary preparation both at work and at home precluded taking the time for the trip. Herbert Hoover, Jr. spoke, and I believe Leo Meyer-son was there. At any rate I had hoped to ask some direct questions. It seems very difficult to get to the "real facts" of almost anything these days. I am fully aware of the great pressure from the "Commercial interests" to obtain some of our frequencies, "in the public interest, of course."

73's

Millard J. Edgerton, WA6VZZ
245 College Ave., Apt. B
Palo Alto, Calif. 94306

WANTED

Young man over twenty-one for sales. Amateur license helpful. See Personnel Manager, World Radio Laboratories, 3415 West Broadway. No phone calls.

Dear Editor:

Enclosed please find small picture of two important and good looking Hams that have just looked over the broken beam of Royal Enders, KØLYO, and are discussing now to repair it for use. The fellow with his hands in pockets is our Past President, Joe Berounsky, KØQDB, who has just given Royal some good advice.

Photo taken by Lou Cutler, WØVLI



Joe Berounsky, KØQDB; Royal Enders, KØLYO

FOR SALE

48 foot self-supporting tower
5 element widespread telrex 6 meter beam
CDR rotor
Coax and rotor cable

Hammerlund HQ-110 with clock

Homebrew revised circuit of Harvey Wells
with SSB adapter and crystals

Antenna bridge key and CW oscillator.

Call evenings after 6:00 P.M.

Mrs. Dennis Hall

XYL of WAØCDH

451-4006

or see Jim Ishii, WAØCDG

11-14-64

Nampa, Idaho 83651

Please change my address to
1115 Dewey Ave., Nampa, Idaho 83651.

Sure enjoy Ham Hum.

Floyd B. Campbell

K7NWC

Ex - WØCBH.

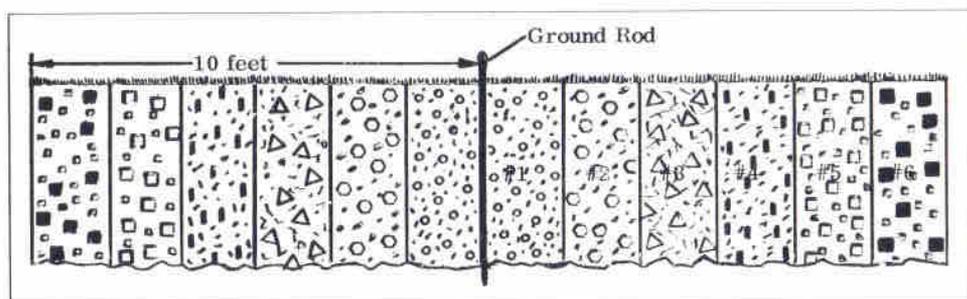
OFFICIAL BULLETIN NR 978 FROM ARRL HEADQUARTERS NEWINGTON CONN NOV 12 1964 TO ALL RADIO AMATEURS BT

FCC has extended from November 16 to December 16 the time for filing comments in Docket 15640. This docket proposes that the distance beyond which applicants are eligible for Conditional Class licenses be raised from the present 75 mile limit to 175 miles from the nearest FCC office or quarterly examination point, and that semi-annual examination points also be counted for this purpose. Amateurs may file reasons in support of or opposition to the proposal, direct to the Commission office in Washington D. C. 20554, the customary original and fourteen copies of comments being needed for. The docket does not affect present licensees, nor does it affect future applicants whose reason for seeking the Conditional is physical disability, military service or absence from the U.S. AR

WHAT GROUND?

Many of you people take ground for granted and by pushing a copper rod into this substance that is beneath us, you think that you have the perfect ground. This is far from true. Let us investigate this mass that is beneath us to see what factors affect the resistance of a ground. Actually, the resistance of a ground is made up of the resistance of the lead, the resistance of the rod, the resistance of rod-to-earth contact, and the resistance of the earth surrounding the rod. This resistance of the lead, the rod and the rod-to-earth contact is insignificant when compared to the resistance of the earth surrounding the rod. Bureau of Standards tests show that if the rod is free of paint or grease and the earth is packed

close around it, contact resistance is negligible. Now, to understand earth resistance, picture the ground rod as surrounded by successive shells of uniform resistance earth of equal thickness. The first shell, the one nearest the rod, will have the smallest cross section of soil at right angles to the current flowing out from the rod; so it will have the most resistance. The next shell will have a larger cross section and will have less resistance. As we keep adding shells further and further from the rod, the cross section of each shell increases and it's resistance goes down until we finally reach a point where the addition of more shells adds next to nothing to the resistance of our ground.

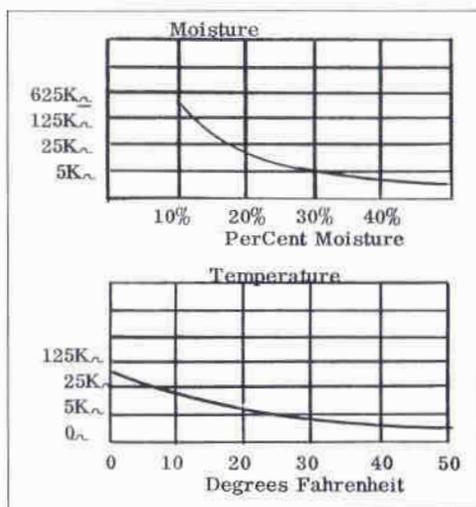
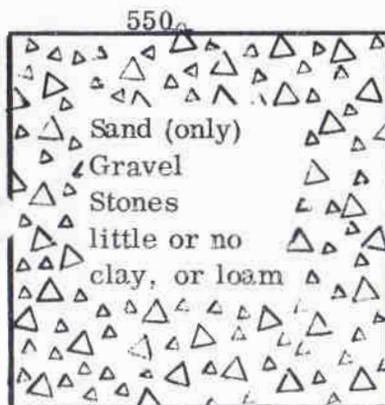
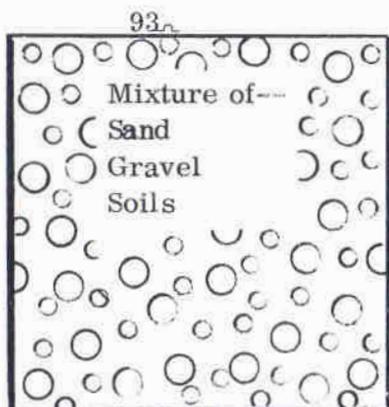
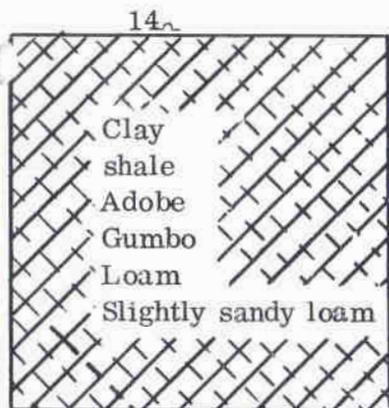


If you were to investigate how far from ground center this point actually is, you would find that 90% of the total electrical resistance is generally within a radius of 6 to 10 feet from the rod. The Bureau of Standards found the least resistance in soil made up of fills containing more or less refuse such as ashes, cinders, and brine waste. An average ground in this material tested 14

ohms. Clay, shale, adobe, gumbo, loam, and slightly sand loam came next with an average ground resistance of 24 ohms. Mixing this same soil with varying amounts of sand, gravel, and soils shot the resistance up to 93 ohms. Finally, when only sand, gravel or stones with little or no clay, or loam constituted the earth, the resistance rose to 550 ohms. Another factor has a

great effect on the resistance of ground and that is the dampness of the earth.

When the moisture content of the soil falls below 20%, the resistance goes up rapidly. For an example, a given sample of soil with 10% moisture has a resistance of about 350,000 ohms per cm^3 . In increasing moisture to 20% brings this down to 10,000 ohms per cm^3 and increasing it to 35% cuts this to 5,000 ohms per cm^3 . Moisture content of the soil varies from about 10% in dry seasons to around 35% in wet seasons averaging out at around 16 to 18%. That is why the resistance of a ground rod driven into the earth will often more than double from a wet spring to a dry fall.



Another item that greatly affects the resistance of ground is temperature. A great change takes place especially when the ground freezes. The resistance of a soil sample from a stable moisture content rose from 200 ohms per cm^3 to 500 ohms per cm^3 as the temperature fell from 70 degrees to 35 de-

degrees Fahrenheit. When it dropped suddenly to 20 degrees, the resistance went up to 6,000 ohms per cm^3 and at 0 degrees, it was more than 40,000 ohms per cm^3 . Where the ground freezes, it's especially important then to be sure the ground rod is long enough to reach below the frost line. In fact, the ground rod should be long enough to reach down to the permanent moisture level of the soil anyway. The top soil has the most resistivity and is subject to wide variations in resistance with changing seasons. The greatest reduction in resistance is ordinarily encountered in going down the first 6 feet, but the 8 foot ground rod is the most popular. In most cases, this length of rod will reach permanent moisture levels.

Thinking about these facts one might think that the size of the rod would have something to do with the ground resistance. However, a comparison was made between a one-half inch and a one inch ground rod driven into the earth and it revealed that the one inch rod with twice the diameter and four times the area, decreased the resistance only about 10%. In general, the rod need only be large enough and strong enough to withstand driving without bending.

Now you say if there is such an enormous variation in a ground, how can I measure the resistance of my ground to see if it is adequate. There are several methods of which will be explained now. One method is to drive two more ground rods so you will have three separate sources. The two that you just drove and the one source that you

are now using. You say why drive the two extra rods? Well, the ground that you are using now whether it be a water pipe or an 8 foot ground rod driven into the earth near your antenna has an AC and DC component. Therefore, we need two more sources so that we can take a series of readings and eliminate the AC and DC components and get a true reading.

Now to use those two rods you have driven into the ground let us call one "A", one "B" and the ground you are presently using "C". Now, measure between A and B for a DC voltage, for an AC voltage and also for the average ohms. Do the same between A and C and between B and C. You will notice that I say the average ohms. To do this you have to take two readings of each resistance reversing the probes and averaging the readings to nullify the effect to the stray DC voltage. Let's take a typical example such as the ground at my QTH. In measured resistance between A and B I found a stray DC voltage of .05 volts, an AC voltage of .16 volts and an average ohmic reading of 80 ohms. Between A and C I found .048, .4 and 87 ohms. Between B and C, I found .09, .7 and 98 ohms. (example BC-83 λ , CB-113 λ average 98 λ) Now, using these three figures, we see that the resistance of A and B was 80 ohms, resistance of A and C was 87 ohms and the resistance of B and C was 98 ohms. Let us add A and B, and A and C together----

A plus B equals 80

A plus C equals 87

therefore --

2A plus B plus C equals 167

Now let's subtract equation

B plus C equals 98 ohms from the
above answer --

2A plus B plus C equal 167

minus B plus C equal 98

2A equal 69

A equal 34.5 ohms

therefore B equals 45.5 ohms

and C equals 52.5 ohms

NOTE: for good accuracy, the resistance of the auxiliary grounds should approximate that of the one being measured and they should be at least 20 feet from that ground and from each other in order to prevent overlapping of their effective resistance areas.

You can see that the stray DC voltage makes it very difficult to measure the average ohms found in your ground. The stray DC voltage and the AC voltage are almost always found in some degree between two rods driven into the earth. We can get away from the DC by using AC and computing the resistance. We simply use an AC ammeter to measure the amount of current a given amount of AC voltage sends through a pair of rods. The resistance is equal to E/I . Or we can use a wheatstone bridge operating on an alternating current of say 1KC and balance the bridge with a pair of headphones. This last method would get away from any errors introduced by the stray 60 cycle AC between our rods. In either case, we would do the

computation exactly as we did when we measured the resistance with the VOM. So now you have two methods, let's take a look at the third.

You can also use a "Megger." The Megger is an instrument designed to measure ground resistance. To use a Megger, an auxiliary ground rod is driven some distance away from the ground to be measured and another rod is driven about halfway between the two grounds. An AC current is fed through an ammeter to the ground being measured and the furthest test ground. The voltage appearing between the ground being measured at the mid-point ground is read with a high resistance AC voltmeter. The resistance wanted will equal the measured voltage divided by the measured current. The Megger is used by many commercial firms and you will find it most readily available at most telephone companies who use this handy instrument very religiously.

One might be thinking now, how do I go about lowering a resistance of my ground that is found to be too high. Electrical codes in many cities require that the resistance of a driven electrode should not exceed 25 ohms, but the lower the better. As you can see, the ground at my QTH is not low enough and therefore I must take steps to reduce it. The first thing I will try is going deeper which can be done easily if you use "Copper-Weld" sectional rods that are threaded on both ends so that they can be driven full length into the earth, another screwed onto the top with a special coupler and driven

the full length again. Low resistance soil is often encountered 20 feet to 40 feet below the surface. In a typical test, a ground that measured 270 ohms at 8 feet measured only 10 ohms at 40 feet.

Another possibility would be to drive several other 8 foot rods and connect them to our present ground. If these new grounds are kept at least 2 to 5 feet from our present ground and from each other, three more rods should cut our ground resistance to about 1/3 its present value.

If this didn't work, we could chemically treat the ground around our present rod to lower its resistance. This should be done by digging a foot wide foot deep circular trench about a foot and a half from the rod and filling it in with magnesium sulfate, copper sulfate, or

ordinary rock salt. This works best where the ground resistance is quite high. The improvement fades, however, with time and unless the treatment is renewed every few years, your ground resistance will creep back up to its original value.

To many people ground seems like a simple thing. You just drive a rod into the earth and this gives you what you are looking for. With these facts, I hope that you will take a more critical view of your ground system. Are you getting the most from your vertical antenna system? Best check that ground!

73's

Bob Ruyle, W0FCH,
N0TIJ

(Technical Paper delivered at the 1963 Midwest ARRL Convention, Broadview Hotel, Wichita, Kansas)



THE CITY OF HOPE DRIVE

The 1964 City of Hope Drive, was held on Sunday, November 15, with the cooperation of members of the Ak-Sar-Ben Radio Club, Inc. Six mobile operators with a base station operation on 6 meters and a 2 meter link between headquarters

and the base station participated. Our thanks and congratulations to the following, who so generously contributed their time, services, gasoline, and refreshments to this worthy cause:

Royal Enders
Bud Smith, Sr.
Jack Barnett (Barney)
Fred Fischer, Jr.
Cecil DeWitt
Lou Cutler

MOBILE OPERATORS

KØLYO
WAØICK
WAØCMK
WØEGP
WØRMB
WØVLI

Ralph Erts
John Snyder
Tom Thiessen
Royce
Mac McLaughlin
C. C. Jacobson (Jake)

BASE OPERATORS

WØSMY
WØWRT
KØPQR
WAØKIL
WAØBMJ
WAØHUS

Tony Martinkus
Steve Lustgarten
John Roberts
Bob Zolecki
Kurt Fischer, Jr. Op. of WØEGP

RIDERS

WAØFHH
WNØJES
WNØKPR
WA9KPI/Ø

Lou (Grandma) Pickert
Harold McClenahan

RELAY STATIONS

WØCCD
WAØDGA

OFFICIAL BULLETIN NR 976 FROM ARRL HEADQUARTERS NEWINGTON CONN OCT 29 1964 TO ALL RADIO AMATEURS BT

The annual ARRL cross indexed Net Directory is now ready for distribution and copies are being mailed to those who have requests on file. Other copies will be mailed only upon specific request. There is no automatic mailing list. If you want a copy of the new ARRL Net Directory, mail or radio a request to the ARRL Communications Department, 225 Main Street, Newington, Connecticut 06111 AR

AREC

November 12, 1964

Throughout the years Amateur Radio has developed a reputation for establishing EMERGENCY COMMUNICATIONS when and where needed most.

BUT, just HOW is this communication established????

IT IS THROUGH - -

the efforts of a few well-meaning but otherwise unorganized and untrained amateurs who were alerted to the situation only by the usually delayed reports of the commercial news media and who may or may not be able to all meet together on the appropriate frequency or frequencies needed to provide communications for the area involved let alone provide the tested and ready-to-go mobile, portable, and emergency-powered stations which may be (and usually are) so sorely needed;

the efforts of amateurs who have organized and who have been training regularly each week at specific times and frequencies on the 2, 6, and 10 meter short haul bands, and the 75, 80, and 160 meter state-wide long haul bands, and those who have mobile, portable, and emergency powered equipment ready to operate on these bands at a moment's notice;

the efforts of those who have established AND PRACTICE a rapidly spreading plan of alerting all members by land-line and should the lines be down or otherwise tied up all members would turn their receivers to their respective net frequencies at the first hint of the development of an emergency

situation (it is not at all improbable that some would have been monitoring the frequencies most of the time as a daily habit anyway);

the efforts of those who have developed skill in handling both formal and informal messages promptly and efficiently under the direction of watchful net control stations who are careful to see that no time is wasted in long or needless transmissions and who have pre-planned definite liaison with the other networks and with Red Cross and other Civil Defense groups.

The American Radio Relay League has set up an organization to provide this latter type of preparedness which is called the AMATEUR RADIO EMERGENCY CORPS. The AREC is closely related to the Government sponsored Radio Amateur Civil Emergency Service (or RACES as it is commonly known), and in most places the amateurs are signed up as members in both organizations and both are combined into the same network on each band.

Although there is already a certain amount of RACES organization in Nebraska, CD Headquarters at Lincoln is presently hampered by the lack of a State CD Communications Officer. Since this puts statewide RACES activity at a standstill they have asked AREC to do the job.

Nebraska is getting fairly well set for state-wide communication with four networks meeting DAILY on the AREC long-haul calling and emergency frequency of 3982.5 kc (0730, 1230, 1730 and 1830 CST) plus a special AREC net at 0830 Sunday mornings. We also

have CW nets on 3525 and 3782 kc. However, after dark propagation in winter here is not very reliable. Thus we need a network established on 160 meters plus a state-wide interlocking of the 2, 6, and 10 meter nets throughout the State, and this we will eventually have (except perhaps not much on 6 as little activity outstate).

Two meters is the only normally used band not likely to be bothered by skip interference 365 days of the year and is also the band least affected by thunderstorm static; hence, it is the most desirable for emergency communications.

The ARRL Section Communication Manager (WØGGP) for Nebraska has appointed me as Section Emergency Coordinator and 18 amateurs in different communities throughout the State as E.C. (Emergency Coordinator) for their respective areas. However, we still need an E.C. for the Douglas County area. Amateurs interested in the appointment should contact me or the SCM for an application blank.

The only actual requirement for an E.C. is that he be an ARRL member. However, there is no requirement for anyone who wants to join AREC other than listing his station and phone numbers with us on a Form 7 AREC Registration Blank. There is no further obligation; however, if you can check into any of the local AREC nets it is hoped that you will do so. AREC membership is good then for the period of one year and at that time may be renewed for another year simply by having your EC or the SEC endorse the back of your membership card.

Local AREC networks are: Sarpy County - 10 meter at 8 P.M. on Wednesday nights and presently on a frequency of 28.600 Mc, 2 meter at 9 P.M. on Wednesday nights on 50.478 Mc.; Lancaster County - 6 meter at 7 P.M. on Thursday nights on 50.4 (their 10 meter and 2 meter nets are yet to be announced).

Sarpy County residents should contact their E.C. KØIAL or his assistants, WAØJCI, WØAFY, WAØJZU or W8DZS/O.

With 73,

Larry L. Abott,
KØJXN/WØHYD,
Nebraska SEC

Phone: 402-291-3756-
Bellevue or
308-942-6385-
Almeria

If I can't be reached on my monitored frequency of 3982.5 Kc., landline me collect when an emergency develops.

**OFFICIAL BULLETIN NR 977 FROM
ARRL HEADQUARTERS NEWINGTON
CONN NOV 5 1964 TO ALL RADIO
AMATEURS BT**

Among the many operating aids available without charge from ARRL are the following, all designed to aid your operating effectiveness: Pointers for Good Operating, WAS map and card record, net directory, phonetic alphabet, ending signals, RST system, DX code, contest QSO record, safety code, ARRL DXCC Countries List, QN Signals for c.w. net operation and GMT time conversion card. Any or all of these are available from the ARRL Communications Department, 225 Main Street, Newington, Connecticut 06111 AR

GUEST EDITORIAL

by W4SDR -- Pam E. Fla.

Can you honestly say that your amateur radio operator and station licenses are, in any degree, being used for the public good? If you can, you belong to the minority.

This statement hits with an ominous thud, especially in the light of FCC's stated reasons for the establishment of an amateur radio service. Many never learn that with every privilege there goes an obligation and if this obligation is not fulfilled, the privilege is eventually withdrawn.

The wheels of national and international government grind slowly and the conscientious, far-sighted Hams are striving to increase the public service rendered by the Amateur Radio Fraternity and, in addition, to improve its public image.

You can help. First: put your own house in order. Join one of the AM, CW or SSB section nets and become proficient in formal communication procedure. Second: sign up with ARPSC, RACES, or your local emergency group and participate in some way: mobile, base station operator, maintenance and repair, organizer or even cook and bottle washer -- it takes a lot of everything from gasoline to coffee to keep a net operating round the clock. Third: recruit others to join in public service activities so that we truly will have an "Amateur Radio Service" with a majority of licensees participating.

de Florida Skip

Here's something that may provide a laugh in Ham Hum:

Electronic Love

If she wants a date -	Meter
If she comes to call -	Receiver
If she wants an escort -	Conductor
If she's cheating -	Detector
If she's fat -	Condenser
If she's thin -	Feeder
If she's extravagant -	Limiter
If she's in error -	Rectifier
If her hands are cold -	Heater
If she fumes and sputters	Insulator
If she's ugly -	Transformer
If she's bossy -	Resistor
If she's slow -	Accelerator
If she's bored -	Exciter
If she refuses -	Rejector

Also, on my car I have a top loaded whip 18 inches high driven by a CB transceiver tuned to 28.8 Mc. that works all around town.

Bernie Phelps

WØIWK

OFFICIAL BULLETIN NR 979 FROM ARRL HEADQUARTERS NEWINGTON CONN NOV 20 1964 TO ALL RADIO AMATEURS BT

The Post Office Department has announced that the amateur radio commemorative stamp will go on sale first in Anchorage, Alaska, on December 15 and in all other post offices the following day. Anchorage was chosen because of the emergency communications performance by amateurs during the earthquakes this year. The Anchorage Amateur Radio Club will furnish its own first day cover for twenty-five cents. Orders go direct to the club, Box 211, Anchorage, Alaska. Information on ARRL covers is in September, October and November QST's AR
