

# HAM HUM

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*Merry Christmas*

# Ham Hum

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Editor---Art Stadler WØQMD

HAM HUM is the official organ of the Ak-Sar-Ben Radio Club of Omaha, Nebraska, mailed monthly to all members and to others upon request. News and information of interest to amateur radio is gladly accepted. All items must be received at least two weeks prior to the second Friday of each month for inclusion in the current month issue. Submit all correspondence to P. O. Box 626, Omaha, Nebr.

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*Dick Eilers, WØYZV, President*  
*Bob Stratbucker, WØHZE, Vice Pres.*  
*Curt Hicks, KØAMM, Secretary*  
*Dick Nystrom, WØUKQ, Treasurer*

Ak-Sar-Ben Radio Club memberships are open to all persons having an interest in amateur radio and its activities. Dues are 50¢ per month or \$5.00 per year when paid in advance. Students rate is 25¢ per month or \$2.50 per year. Initiation fee \$1.00. Special rate for OM-XYL, \$6.50 payable annually. Meetings are held on the second Friday of each month.

## OFFICERS

Dick Eilers, WØYZV, President  
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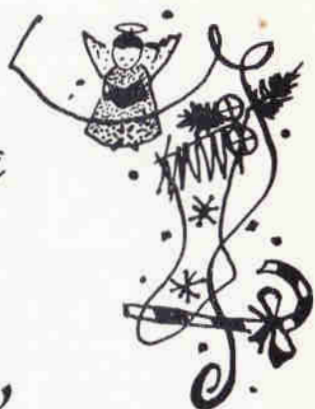
CIVILIAN DEFENSE  
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NOVICE  
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FIELD DAY  
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*It will be a  
"Merry  
Christmas"*



*Celebration!*

**Sheraton-Fontenelle**

18th & Douglas

8:00 P.M.

**Friday December 14th**

## **Prizes!**

VTVM    Grid Dipper    Q Multiplier    Impedence Meter!

There will be refreshments, too!

Be sure to bring a gift-wrapped gift for operation "Big Swap"! A hamgear gift of \$1 value is suggested. You may be one of the lucky winners.

All members in good standing, and in attendance, will participate in the prize awards.

## TRANSISTORS

Heat and light cause considerable change in the conductivity of semi-conductors used in transistors. Either will cause changes in the random motion of the electrons in the elements.

The mechanisms which cause these changes may be explained simply by considering the effects of absorbing energy, heat or light. The atoms in a crystal are held together by the valence electrons in the outermost shells of adjacent atoms. Germanium and silicon atoms have four valence electrons in the outermost shell, each of which pairs with an electron of an adjacent atom to form a covalent bond between the atoms. Thus, each atom is electrically tied to four adjacent neighbors. In a single crystal the result is a very orderly arrangement of the atoms in a geometrical pattern. The electronic covalent bond of the semiconductor can be broken by absorption of energy, the source of which can be light or heat. Breaking the bond frees an electron. The free electron can move about in the crystal with little hinderance. This also produces a "hole" at the place vacated by the electron. This hole is also free to move about in the electron.

It is rather difficult to conceive holes moving. You dig a

hole in the back yard, the dirt which came from the hole may move but not the hole. Consider then, that you dig four holes at points A, B, C, and D and place the removed dirt nearby, in separate piles. Now you have four holes in four locations. Next dig another hole and place the dirt which you remove from this fifth hole in hole A. Hole A in reality disappears and a new hole appears, the fifth you have dug. Call the fifth hole A and we still have four holes-A, B, C and D, but hole A is now in a new location. I might suggest that you do your digging at night without lights. If you thought explaining TVI to the neighbors was tough, try explaining holes to them.

These holes and the electrons which moved to cause the holes are continuously moving. We understand that there is usually an equal number of holes and freed electrons.

When a voltage is applied to the semi-conductor, and the material is illuminated, a marked increase in current will occur. This is the photo-electric conductivity effect. The effect of light can be eliminated by using an opaque case for the transistor.

In a similar way, thermal energy absorbed from any source

can cause some energy absorptions to take place in germanium or silicon. The energy absorbed releases an electron from its covalent bond, and this simultaneously generates its complement, a "hole". When the material is heated with a voltage applied, a marked increase in the current occurs. This is the thermoelectric conductivity effect. Minimizing the extraneous effects of heat is a major problem in semi-conductor devices.

The conductivity of germanium and silicon can be altered in a controlled manner by chemically adding minute amounts of certain other elements. Next month we will discuss the meaning of the PN Junction.

## CHRISTMAS PARTY AT FONTENELLE

We're all set for a great big Christmas party at the December meeting and with all the work already completed by the Committee it should be a grid stripper. For this meeting ONLY we are changing the meeting place to the Sheraton-Fontenelle, and this should lend very well to the festivities of the occasion.

We have learned that there will be some mighty fine prizes among which are included QMultiplier, VTVM, Grid Dipper, Impedance Meter, plus a whole

host of other items, all of which add up to nearly \$200 in loot. As in the past the drawings will be for all paid up members so if by chance you have forgotten to "see the treasurer" don't miss him as you enter the meeting room.

We are asking each member to bring with him a gift for one of the other members. It is suggested that you bring a gift of ham gear worth \$1.00, all wrapped up in Christmas tinsel, and place it with the others "Unter der tandenbaum". We will have a drawing for gifts and are hopeful that everybody will go home with a Santa Special. Among the gifts will be the big prizes, so instead of somebody leaving with one of the "swap items" there will be a group of smiling faces with lush stuff when the whole show is over.

We're not trying to tell anybody what kind of prize they should bring, but let's see if we can dispense with some of the items that showed up last year. Burnt out tubes, punctured filter condensers, and 1926 vintage variometers are not the kind of items that seem to fill the bill. What kind of gift do you want?

So, we'll have fun, and, food, and prizes, and elections, and those things that go for a lot of fun...all that is necessary is that you be in attendance.

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## INTEREST AT PEAK

If you were not at the November meeting you missed one of the hottest discussions of year.

Al Draper, CZE, presented the paper, "Single Side Band: Is it really better that amplitude modulation", as originally written by John Costas, W2CRR.

The SSB gang were out in numbers and with ears in position and sitting on the edge of their chairs they absorbed every word of Al's program discussion. While much of the material flew high over the head of this electronic peasant, it was obvious that the subject was a controversial one and a matter that will be brought into clearer focus in the months to come.

The question and answer period was well attended, with Al on the receiving end of many pointed inquiries by apparently able to satisfy even the most dubious.

If you are interested in Double Side Band operation; in a rig that will provide 208 peak watts output with a lowly pair of 6146's; and efficient modern operation, then we suggest that you watch the future issues of CQ for more on this real interesting subject.

The program was a good one and we appreciate your contribution Al.

\*\*\*\*\*

Bob Kurth, W9CDO, was a visitor at the last meeting and we hope to see you soon again Bob. CDO is with the Hallcrafters Company in Chicago, working in the Airborne (Government) Division.

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## C. D. INTEREST HIGH

We now have the CD operation in full swing! Every Monday night you can tune the 2, 6, or 10 meter band at 2100 and you will hear the 3 nets in the midst of practice sessions, drills, dry runs, or handling traffic between Omaha, Lincoln and Atlantic or Des Moines Iowa.

John, WRT, is doing the NCS on the 2 meter band, Chuck, KØCHK, heads up the 6 meter group, and KØAMM has been center pin on 10. We have had a few headaches in getting the whole show on the road, we will probably have many more, but it looks like we are headed in the right direction.

There has been an average of 19 members checking in each Monday on 10, the 6 meter net has had a solid 9 member check in and after only three weeks the 2 meter group have a 10 man turnout each session.

The CD Communications van is now operative with the Viking 2 and a brand new HQ

140XA plus other necessities all set up, tested, and ready to roll on a minutes notice. We still have to erect an antenna at Police headquarters for the gear located at that location. Otherwise, that setup, which is a duplicate of the van installation, is also air worthy and ready for any contingency.

The mobilers are in the process of rejuvenating their activities so it appears that we can report that we are much closer to preparedness for any emergency than we have been for a long time.

We are glad to see the interest and turnout in the behalf of CD and extend a hearty thanks to all that have and are playing a part in the program.

\*\*\*\*\*

At this writing we don't know all the particulars, but the VHF men are currently in the process of setting up the VHF station, in the ideal location, and are looking forward to putting Omaha on the front pages in the forth-coming VHF contest. We are digging for more of the particulars and will keep you posted,

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FOR SALE: Globe Scout Transmitter. First \$30 takes it home. See Al McMillan, WØJJK.

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## IMPORTANT SESSION

The December meeting promises to be a gala affair, but it also is one of the most important sessions of the year. Under the Articles of Incorporation we are required to elect those men that will guide us through the NEW YEAR. This means that every member should be in attendance, make his voice heard, and cast his ballot for the candidates that they feel will be beneficial to the Club as a whole.

Heading an organization the size of ours is certainly no easy task. It is not the job for a procrastinator, but rather a job for a man with vision, ambition, and "guts". It's not an easy task to satisfy the wishes of every member, for at times, the impossible takes just a little bit longer than anticipated. It is for that reason that every member should turn out for the December meeting in full force. We need the best possible man in the Club to lead us and it's up to you to pick the right one.

We will be looking for you at the December meeting to wish you a personal "Merry Christmas", but if we want a Happy and Prosperous New Year for the Ak-Sar-Ben Radio Club, Incorporated come on out and VOTE.

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## THE END OF MOBILE OPERATIONS

Had you ever thought that some day in the near future there would be no such thing as a mobile amateur radio station. Consider, if you will, the extreme difficulties which are presented to the mobile station operator.

In these days when the average buyer of transportation in the United States buys a new gas bucket every three years, the feat of keeping a mobile rig installed and working assumes mountainous proportions. Consider that it usually takes from six months to one year for the average ham to acquire the necessary nerve to drill a hole in the family jalopy, not considering any family pressure. Then it takes about one whole year of sweat, strain, frozen fingers, burred knuckles, curses unheard of before, begging, borrowing, tuning and retuning, building and rebuilding and a little money to get the rig installed and working. Therefore only one year is left for operation before the iron pony is traded off for the new job. Of course, plans have already been laid for doing the installation up right in the new car.

When the new car arrives and a survey is made of the monster, you find that the old rig won't fit, it'll look bad,

the voltage is wrong, there is no place to mount the generator, there is no place for a whip, all of the cables are too short, if you do mount the converter under the dash, your arms are too short, and if you have one, the XYL says NO.

Some philanthropic organization with a million bucks behind them should impregnate so-called dash board design departments of Ford Motor, Chrysler, General Motors, American Motors and Studebaker-Packard with spies; their job being to bring back the good old 1931 type dash board, so equipment may be mounted under it within reach of the hand. This would please some 100,000 or more customers of the above mentioned iron works.

Of course, if any of you have looked under the hoods of the new 1957 wagons, you'll pop your cork for sure. On some of the jobs there isn't room for one small crystal calibrator.

On the other hand, some of the commercial ham receivers and transmitters are getting a fat bulge to their proportions. A home-brew transmitter seems to fit most of the applications best. The rig with separated components would fit most all applications. That is the rig with a separate VFO mounted



near the driver, a RF section mounted somewhere near the front seat, and a modulator and power supply for mounting under the hood or in the trunk.

Don't give up yet, for there is still a lot of fun and enjoyment in owning a good mobile rig. I suppose the Europeans have the same problems due to

the small size of their cars. Have heart, there'll be activities galore in the months to come for the mobile enthusiast in and around Omaha, if the old grapevine has it right. Prizes, hunts, contests, and many others, so reconsider and work a bit harder and you will have a rig you'll be proud of.

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### HINTS ON HINDERING

The following is reprinted from the Houston, Texas Optimists Breakfast Club Bulletin. We feel that this list is so applicable to so many that we couldn't resist the temptation to pass it along for it is an interesting list of directions that teaches something---in reverse.

An old and experienced club-man recently compiled a list to show the ways members can hurt their organization and discourage the officers. He arrived at 17 points which are as follows: (1) Don't attend meetings--but, if you do arrive late. (2) Be sure to leave before the meeting is over. (3) Never have anything to say at the meeting--wait until you get outside. (4) When at the meeting vote to do everything. Then go home and do nothing. (5) The next day find fault with the officers and your fellow members,

(6) Take no part in organization affairs, (7) Be sure to sit in the back so you can talk it over with a member. (8) Get all the club will give you and give nothing in return. (9) Never ask

anyone to join up. (10) At every opportunity threaten to resign. (11) Talk co-operation but don't co-operate. (12) If asked to help, always say you haven't time. (13) Never read anything pertaining to club work. (14) Never accept an office since it is easier to criticize than to do anything. (15) If you are appointed to a committee, never give your time or service to it. (16) If you receive a bill for dues, ignore it. (17) Don't do any more than you have to, and when the others willingly and unselfishly use their ability to help the interests of the club along, then howl and cry that the organization is run by a "clique."

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## TO THE RESCUE

At 4:50 P. M. on November first a major telephone cable was accidentally cut, and as a result a sizeable section of South Omaha was without fire, police, or alarm service of any of any type. In addition hundreds of homes and commercial establishments were without phone service.

It became imperative that communication and warning services be established. As a result, CD headquarters activated the amateur communi-

cations nets and put into service segments of the 6 and 10 meter nets. The following participated in the activity by patrolling the various sections or acting as net control: KØCHK, WØYZV, KØCKS, KØCQX, KØIMB, KØAMM, WØFQB, WØRMB, and WØQMD.

The entire group remained on the air until communications had been re-established at 1:30 A. M. the following morning.

Here was another opportunity for amateur radio to assist in community affairs.

## FROM THE PRESIDENT

This month marks the end of our first full year as Ak-Sar-Ben Radio Club, Inc. During this year, your Club has been operated by a Board of Trustees. Your Board of Trustees has tried to represent you, the members who elected him, in such a way that all of your wishes, desires and suggestions for the Club would be given due consideration.

I wish to commend them most highly for the fine job they have done this past year. I wish to thank them both as a Board of Trustees and as individuals.

On their behalf and mine, I wish to also thank those individuals who have helped so much in the various activities of the Club, and those who

for one reason or another could not become active but did give us continued to support.

This opportunity to act as your President for this past year has been greatly appreciated. I will take advantage of the situation to state that in all my business and personal life, I have never seen or been associated with a group of people who have been more helpful both to each other and to the public in general than Hams. They give freely of their money without even the possibility of monetary reward, taking for themselves only the personal satisfaction of being of service to others.

A super special thanks goes to the ladies so often forgotten and yet so helpful.

Dick, YZV

## NOT TEQUILA

IOS, Frank Cooper has just brought home a new bottle that he will have in operation in in very short order. However, this new bottle is slightly different from the type used in the two full gallon rigs that adorn his shack. The new variety will be used by the new baby daughter....who was born on November 23 at the Methodist Hospital. Congratulations to Lotus and Frank and the best wishes from the whole gang!

\*\*\*\*\*

Have you heard the news? Al McMillan, JJK, is the new Director of Amateur Sales at World Radio. Congratulations, Al, and much success in your new assignment.

\*\*\*\*\*

Who said there is no such thing as DX on 6 meters? KØCHK, Chuck McCullom, was in contact with PZLAE at Paramaribo, Surinam. Chuck was chewing his finger nails while awaiting the arrival of the QSL. There were others that heard the contact, Mac, so you can make your story stick.

\*\*\*\*\*

Just in case you missed it...the Board passed a motion at their last meeting that provides for the payment of dues on an annual basis starting with the December 1956 meeting. This means that if your dues are now due, senior memberships are \$5 payable all at one time. In the past it was 50¢ per month. This saves you a buck and at the same time eliminates a lot of work for the treasurer.

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The W9's were well represented at the last meeting. Captain Nye, W9VNM was a visitor that absorbed the DSB discussion. Glad to have you aboard, Captain.

\*\*\*\*\*



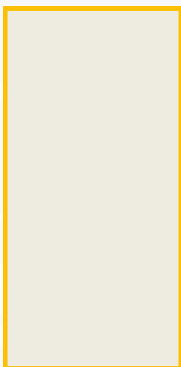
"I hope you're dreaming up ways to get more work out of people who dream."

AK-502-R-BEN RADIO CLUB INC.  
P. O. BOX 626  
OMAHA, NEBRASKA

NEXT MEETING  
SHERATON - FONTENELLE  
FRIDAY DEC. 14TH, 8:00 PM  
CHRISTMAS PARTY



QTD



~~Form 3647 Requested~~