



HAM HUM

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February 1974

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No. 2

NEXT MEETING

WHEN: FRIDAY – February 8, 1974

TIME: 8:00 P.M.

WHERE: FITZGERALD FRIENDSHIP ROOM,
COMMERCIAL FEDERAL SAVINGS AND
LOAN ASSOCIATION
4724 South 24th Street, Omaha
(Free parking in rear off 25th Street)

PROGRAM: AMSAT – chaired by Rip, WBØGAJ.
Here's your chance to learn about another facet of our hobby. A discussion, complete with slides and demonstration either live or by tape as the situation permits. Communication by satellite is of interest to all and even though you may not participate in it personally, amateur radio is definitely involved.

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.



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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: 397-3000 - EX. 3761
 Associate Editor: Ervan Heinz, WAØEEM
 Phone HOME: 553-2033
 BUSINESS: 553-4700 - EX. 331

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A SPECIAL NOTE TO HAM HUM READERS

1974 should be a banner year for the Ak-Sar-Ben Radio Club! Dick Eilers, Club program coordinator and your editor, and your Club president are planning some top-notch programs for coming meetings. In the planning stages now are programs ranging from topical technical discussions/demonstrations to general operating, of interest to Club members and guests.

As Club president, I wish to encourage those readers who have missed past meetings for one reason or another, to reintegrate themselves with the Club members and to attend the upcoming meetings (and bring a friend). You OMs who have been regular attendees are likewise encouraged to continue to attend.

Interested in 2M FM? Nets? RTTY? Slow-Scan? Antennas? Oscar? How about an orientation trip out to SAC (tentatively planned for April)?

As announced at the January meeting, the program for March will

be the auction; September, the Hamfest; November, Past Presidents' Night; and December, the Annual Meeting and Christmas Party.

So whatever your "bag," come on out to see us soon. We miss you!

Rip, WBØGAJ, President
 Ak-Sar-Ben Radio Club, Inc.

RECENT CONTRIBUTORS

Repeater Fund

Frederick Fischer, Jr., WØEGP
 William A. Schwiesow, WAØSOQ
 Hugh L. Tinley, KØGHK
 Norval E. Bowen, WAØNPF
 Connie Bowen, WAØMYF
 Robert D. Andrus, KØLUG

Auto Patch

Randy T. Curtis, WBØDDZ
 Robert J. Cain, WBØLBT

SUMMARY OF JANUARY MEETING

The first meeting of the year was held on January 11th and it was gratifying to see all the hardy hams who braved the -10° F temperatures to attend. Perhaps the program for the evening was an added enticement.

In the business portion of the meeting, the President reported the Board had selected Charles F. Kelly, WAØUZX, as a replacement for Marion (Mike) Wilczynski, WBØBMV, who having been elected Vice President for 1974 at the December meeting, vacated his seat on the Board. The members present voted their approval of this selection.

The President then announced the Board had elected Patrick Scolla, WBØEGR, as Club secretary and, anticipating member approval, had elected Charles Kelly, WAØUZX, as Treasurer. He then expressed thanks to KØUIV, Del Gibson for his service as Club Secretary for 1973 and to Charles Kelly for his service as Treasurer.

Bob Lockwood, WAØDHU, reported on the progress of the Code and Theory classes. Leo Connolly, KØJIU, related to the assembly his recent dialog with Prose Walker, FCC Chief of Amateur and Citizens Division.

Dr. Roger Johnson, WBØGAI, served as moderator for the program entitled "How To Get Started In RTTY." A panel of speakers including Jack (WAØSAQ), Jim (WØYCP), Leo (KØJIU) and Rip (WBØGAJ) spoke on sub-topics and fielded questions from 3 members. Several lively debates ensued among the panel of "experts" and resulted in some spirited and amusing exchanges. (Despite rumors to the contrary, Leo *does* know what a transistor is!)

A live demonstration of VHF RTTY was then presented by Roger, WBØGAI, employing an assortment of equipment including a Model 15 Printer provided by Jim, K5TNP/Ø. The only problem was hearing Roger over the "garbage grinder" noise of the printer.

Signals for copy were provided by Neil, WBØEMU, from his home QTH on 146.70 Mhz FM using AFSK.

A Model 14 Reperf was employed to produce TTY tapes for inspection by the members and guests.

Altogether a most enjoyable evening. Our thanks to Roger for assembling a fine program and fulfilling the "design objective" of stimulating local interest in RTTY!

Rip, WBØGAJ

HI, CONGRATULATIONS!

The Ak-Sar-Ben Radio Club, Inc. extends congratulations to Al, WØJJK, upon the first anniversary of Hobby Industry, Council Bluffs, late last year. Al has recently expanded his facilities and for those who haven't visited HI lately, and for those who have, Al's expansion allows for display of more fine equipment and parts.

We all know how few ham shops are in the midwest (K. C. and Chicago are the nearest) and how great it is to have a local store. So why not help support this rare bird????

Al, best of luck for '74.

73 ES TKS

For the Ak-Sar-Ben Radio Club, Inc.

Rip, WBØGAJ, President

Note: HI is also Ham Hum's best advertiser (see rear cover).

REPEATER REGULATIONS

As announced by President Rip, WBØGAJ, at the January meeting, the Repeater Committee under Frank Taylor, WØGOJ, is developing regulations for repeater operation. These regulations have been discussed for some time by the Board and study has been made of the regulations of many repeaters throughout the country. It was felt since the repeaters are a group project, the members should understand and agree to the regulations. These regulations will be brought up at the February meeting for the approval of the members in the following form, subject to any modifications adopted at the meeting.

REGULATIONS FOR REPEATER OPERATION

(Both WRØABQ and WRØACE except
when using autopatch operations)

1. Do not call CQ or make a lengthy blind transmission into the system. The appropriate way to announce your presence on the repeater is by stating, "WØXYZ monitoring 94."
 2. To join or momentarily interrupt an existing QSO, use a single "Break" and your call letters. Use of the double or triple "Break" should be reserved for emergencies.
 3. When a breaker is heard, he should be immediately recognized and allowed to state his purpose.
 4. When breaking a QSO, the breaker should not begin an independent or lengthy cross-QSO without permission. Either join the exist-
- ing QSO, QSY with the person called, or wait your turn for the frequency.
5. Let the repeater "tail" drop between transmissions. Allow breakers the opportunity to get in, and let the automatic timer reset.
 6. There is no need to give the repeater call letters unless the automatic ID is inoperative.
 7. If you are told that your signal is weak or spotty into the system, and that you are difficult to copy, wait until you are in a better location before continuing to transmit. Do not burden the many listeners with the popping and scratching of an inadequate signal. Remember that it is possible to key the repeater without having sufficient signal strength for your audio to be understood.
 8. During the weekday commuter hours (0700-0900) and (1630-1800) refrain from rag-chewing and be alert for breakers.
 9. Don't be a button-pusher. There is no need to use the repeater for a test set, and additional operation shortens the life of the system as well as being annoying to stations monitoring the frequency.
 10. Do not conduct yourself on the repeater in a manner likely to bring discredit to Amateur Radio or to risk citation by the FCC. Remember that many non-hams as well as wives and children of hams monitor the frequency.
 11. Please cooperate with your club in an attempt to encourage repeater users to share the burden and responsibility of maintaining the repeater systems.

**REGULATIONS FOR
AUTOPATCH OPERATION
(WRØACE Only)**

1. Identify prior to accessing the autopatch ("WØXYZ autopatch").
2. Identify when the call is completed ("WØXYZ clear autopatch").
3. Do not interfere with another person's use of the autopatch, or join an autopatch conversation unless specifically invited.
4. Do not make autopatch calls from a base station or where a phone is readily available unless necessary.
5. Do not use the autopatch for calling the various service numbers (weather or time) except for testing during light repeater operation hours.
6. Do not make continued attempts to access the autopatch if initially unsuccessful. Your location may be bad or your system not functioning properly.
7. Business related calls on the autopatch are forbidden by the FCC, also any attempt to bypass Toll Fees are forbidden by ICC regulations.
8. Inform the person called that you are speaking via two-way radio. Avoid the embarrassment of having something broadcast that is private, personal or improper.
9. Long distance and operator assist calls are not possible on the Ak-Sar-Ben Radio Club autopatch. Dial 911 for emergency and inform the special operator which Safety Service is desired (OPPD, Council Bluffs PD, etc.).

10. Reserve testing your touch-tone pad for hours of light repeater operation. If possible, test your equipment off the air.
11. If you repeatedly get a wrong number, refrain from using the autopatch until you are in a better location.

These regulations were adapted from an article published in World Radio News.

Our sympathy goes to Lyman Nelson, WØØIEN, of Hooper, Nebraska, whose son was accidentally killed last month.

MEMBER NEWS

Jon Penner's call has been changed from WNØGQT to WBØGQT. Congratulations, Jon!

ASSISTANT DIRECTOR

Paul Grauer, WØFIR, Director Midwest Division ARRL, has appointed WØYZV, Dick Eilers, as Assistant Director. He carried this appointment with the previous two Directors.

The Certificate reads: "In his capacity of Assistant Director, he shall assist and cooperate with his Director, in such manner as indicated to him by the Director, in furthering the interests of amateur radio and the activities of The American Radio Relay League, Inc."

LAS VEGAS NOTES BY KØJIU

As I mentioned at the January meeting, I attended several forums at the S.A.R.O.C. Ham Convention in Las Vegas on the first weekend of this month. Prose Walker was present and indicated that there were some revisions of the repeater rules coming out. He announced at one of the forums that they have issued temporary authority to one repeater to operate without a designated control station in attendance and without continuous monitoring, provided that they use restricted access to the repeater, such as PL or Tone Burst entry. The theory being that each of the stations that would be equipped with this discrete frequency of Tone Burst or PL and would in effect be a control station. The temporary authority extends through until June of this year on the particular station involved and he indicated that if they had no problems the repeater rules would probably be revised so that we could operate with as we do now or have in effect a closed repeater with Tone Burst access or PL access, thereby eliminating the need for the continuous monitor.

Mr. Walker also stated that the repeater rules were being simplified and streamlined and that processing of all back applications should be completed within 90 days. He stated the main problem was the fact there was no uniformity between applications and that the adoption of uniform applications by the ARRL has done much to speed up the issuance of repeater calls.

He also indicated there would be a complete restructuring of the amateur licensing system with some change in requirements. He said the CW requirement would not be dropped

altogether, however the method of administering the CW portion of the test would be different in that the applicant would not be required to copy the CW material letter by letter, but instead, could just sit back and listen and make whatever notes he might desire and at the conclusion of the CW portion of the test he would then be given a comprehensive examination on what was contained in the CW material. He said these exams in the future would in all probability be issued by Civil Service Examiners, thereby making it possible for the exams to be given either on a monthly or possibly even a weekly basis in various areas of the Country. The exams would not have to be given by an FCC examiner. The thought being that the examining points would therefore be more numerous and more accessible to the amateurs and the different method of giving the CW exam would eliminate the freeze up that some amateurs go through and also the handicap of some amateurs who are able to understand the CW but not able to get it all down on paper. You could of course still copy verbatim every letter if you wished.

Relative to 220 mc he stated there is nothing definite yet.

He also mentioned the fact that the emergency medical service will in the near future be allocated certain portions of the 450 mc. band and indicated that there is not much he or any of the amateurs could do to stop the loss of these frequencies. Actually, this is a loss to us in this area, since one of the frequencies is a frequency that we have used for repeater link frequencies on the Omaha machine at various times, so this loss will directly effect us.

He was specifically questioned on autopatch activity and 2 meter repeaters and stated that while autopatch has neither been allowed or disallowed by the rules, there is no change contemplated in this at this time unless the toll avoidance and toll fraud problem causes difficulty.

It was the consensus of most of the people present that autopatch is primarily intended for the use of mobile stations and should only rarely be used by base stations.

On another subject, the 10 70 teletype repeater is in operation and has been for several weeks. It is being operated under the call of WRØACE, however a separate call will be issued for this repeater shortly. The receiver is at the same site as the 22 repeater and the transmitter is located at the same site as the 82 repeater, however it is only running 20 watts and it is not contemplated to run high power on this transmitter, since its communication will be primarily with base stations.

Yours truly,
Leo F. Connolly

FOR SALE

Heathkit SB620 ham scan spectrum analyzer . . . \$75.00

Jay C. McAleer, WAØLLQ
Phone: 339-3448

My mother-in-law received a call from the doctor. He said, "I must tell you that your check came back."

And my mother-in-law said, "Good. So did my arthritis."

Charleston, West Virginia
Scottish Rite Bulletin
from St. Louis, CD

FUSES AND FACTS

By—Cecil DeWitt, WØRMB

A fuse is a controlled point in a circuit that will melt when the circuit is overloaded. With this fact in mind we can see that all circuits are like a chain and we have put in one weaker link (the fuse). When the pull on the chain (current) gets too great, the chain will break at this point (fuse will blow). If another point was weaker (a small wire, bad connection, etc.) this would be the point to break (blow).

If the weak part is not in the fuse holder, then anything could happen from the circuit needing repair to a FIRE. Let's take a look at fuses and the aspect of how they work.

Amperage Rating:

Amperage rating of fuse is the current that a fuse is designed to work at a temperature of 68 degrees. A fuse designed to work at 68 degrees and rated 10 amps will not be rated at 10 amps at 20 degrees or at 100 degrees. At 20 degrees the amp rating will be more. This rating depends on material of construction. At 100 degrees the amp rating goes down much lower. This fuse may have a rating curve (chart) of:

20 degrees =	15 amps
40 degrees =	11 amps
68 degrees =	10 amps
80 degrees =	9½ amps
100 degrees =	8 amps

The curve may or may not be linear; also different curves for different types of fuses. This is the reason why equipment operated in hot places will sometimes blow a fuse for no reason.

The other way when equipment is in a cold environment, we have parts burn out even though we have fuses of

called for value in the circuit. The fuse is actually too large (amps) and should be of a smaller value (amps).

When the amps rating is exceeded by the designed percent, the material (usually metal) will melt and the fuse blows. The fuse melting will explain why temperature will control the rating. If the design temperature is 68 degrees and the temperature becomes greater to 100 degrees, it is easy to see why the fuse can melt faster because it takes less heat to melt the material of the fuse (lower amp rating). The other direction, if the fuse is cold, then it takes more heat to melt it (higher amp rating).

Voltage

Fuses are rated not only current but also by voltage. When a fuse "blows," there is a gap formed. If voltage is great enough and gap is small, current will flow across this gap and an arc or sparking will take place. There is a higher resistance in this gap and much heating will occur and possible damage to surrounding parts or equipment. To overcome this, the higher voltage fuse is designed to have a wider gap when it blows.

Within limits when the current is exceeded in a fuse, it will blow regardless of voltage ratings.

The previous statements were based on air-damped fuses, but many fuses use damping material and this is used to put out the arc after the fuse blows.

Resistance

Fuses have resistance and this with amp (current) form wattage and is truly what blows fuses. The heating across the fuse resistance by the current will melt the fuseable link and blow the fuse.

High amp fuses have very little resistance while fraction amp fuses will have several ohms resistance. A quick check with an ohm meter will quickly

show this. Use lowest scale and check different sizes. (Don't check fraction amp fuses - 1/100 or so - with an ohm meter. They may blow.)

So in different extremes of temperature, the need to change fuse for correct protection is needed, seldom is done. Remember, a fuse protects and is worth more than the penny substitute many people use.

In your equipment the first blown fuse may not mean too much. But if a correct size of fuse is put in and blows within seconds, then you have trouble. Don't put in a bigger fuse without knowing why the weakest link of the chain may break. It may be the fuse; it may not. Fuses sometimes go bad just to go bad and for no reason of the circuit (Murphy's Law).

FOR SALE

Model 144-1 Parks Electronics two meter converter; commercial solid state with built-in power supply. Used 10 months. Mint condition. \$50.00.

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Phone: 339-6432

AMATEUR RADIO THIRD-PARTY TRAFFIC

By John Deegan, WA4QLZ

Of all the many facets of amateur radio, the handling of third-party traffic must rank as the most important. Third-party traffic is handled in this country and relayed to certain other countries with texts of distress, health and welfare, seasonal greetings, and purely personal matters. Networks have been organized to relay this traffic, and operators have trained themselves to efficiently pass written third-party traffic.

As simple as third-party traffic is handled in the United States, in other countries just the opposite exists. We are in the minority of countries whose governments allow message traffic (and phone patches) to be passed free of charge for a third party over amateur radio circuits. In most countries the communications systems are a government controlled monopoly, and very strict rules exist covering the types of communication that may be carried on amateur radio.

In Miami recently an incident occurred involving a U.S. amateur and a non-U.S. amateur with the passage of third-party traffic across international boundaries.

All amateurs should be cautioned to know and understand international rules and regulations concerning amateur DX communications and traffic handling, and should be aware of DX restrictions on banned countries and message handling. U. S. amateurs may handle third-party traffic only with the following countries: Argentina, Barbados (U.S. stations - 8P only), Bolivia, Brazil, Canada, Chile,

Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Greenland (XP amateur calls only) Guatemala, Guyana, Haiti, Honduras, Israel, Jordan, Liberia, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad & Tobago, Uruguay, and Venezuela. Certain other agreements exist between the U. S. and foreign countries on the passing of traffic concerning amateur satellite operations, 4UITTU, and Project Hope personnel in Jamaica.

The above list is *all* the countries the U.S. presently (12-'73) will allow amateur third-party communication. Due to the close proximity of many Caribbean nations that do not allow third-party communications by amateur radio, Florida amateurs must be aware that third-party communication into the Caribbean is the exception, rather than the rule. As a general guideline, United Kingdom countries do not allow third-party traffic with the United States.

Apparently nothing has occurred concerning the popular Miami amateur involved in the recent incident. Both parties were cautioned by other Miami amateurs on restrictions of communications of this type, and the QSO ended. The foreign amateur was using a portable VP7 call sign. Just a few years ago, another U.S. amateur accepted a request for phone-patch traffic from a European amateur to a person residing in the U.S. In that case, the European received a bill for transatlantic phone call from his government's post and telegraph administration and the U.S. amateur received a citation from the FCC.

Message handling is a simple matter

From the Mid. Atlantic Repeater Council column in AUTO CALL, we find the following:

In the meantime, to those of you who are new to the wonderful world of 2 meters FM, we extend a cordial welcome and offer this column with the hope that you may find some of the information helpful. Whether you are a newcomer or one of the old-timers, a brief review of some of the more accepted operating procedures can't hurt.

A squelched receiver with channelized frequency mode coupled with repeaters is probably as strange as was your first SSB contact. In case there is any doubt in your mind about whether or not it is really ham radio, it may be interesting to learn that in a recent review of several local repeater groups, it was found that over 50% of the users held advanced or extra class tickets. It is, indeed, ham radio!

You may be troubled by the fact that many of the old familiar operating practices have been discarded on a band where short, concise QSO's are the order of the day. As an example, you should never hear CQ. To indicate that you are looking for a contact, simply announce your call and the frequency that you are monitoring. Long calls, with phonetics, are not needed. Neither are repetitious IDs - you are only required to ID once every ten minutes plus at the beginning and end of each QSO. Even the break procedure is different! Normal breaks are indicated by announcing your call only. The word "break" spoken once is accepted as meaning that time is critical, spoken twice indicates that you have urgent traffic, while spoken three times February 1974

signifies an emergency, and is usually reserved for situations involving peril to person or property.

This is a crowded band, so remember that courtesy is the watchword. Keep your QSOs short, leave space for others to break in and bear in mind that no one has preferential rights to the frequency unless it be for an emergency. Keep your griping reserved for land line or eyeball contacts - they don't belong on the crowded channels. Relax and enjoy it and I'm sure that you will find that 2 meters FM is great fun.

de AUTO-CALL

Two men were sitting at a bar. One was very downcast, and the other bored with his friend's sorrow. "My wife doesn't appreciate me," said the sad one. "Does yours?"

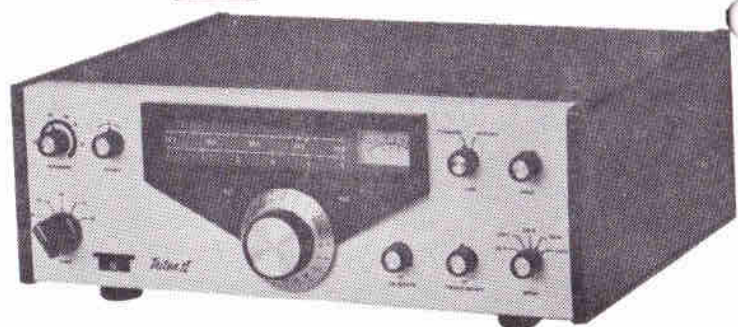
"I don't know," said the bored one. "I've never heard her mention your name."

The Oklahoma Mason
from St. Louis, CD



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AL - W0JJK



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• 73,
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