



# HAM HUM

Published by

AK-SAR-BEN RADIO CLUB, INC. - Omaha, Nebr. 68101

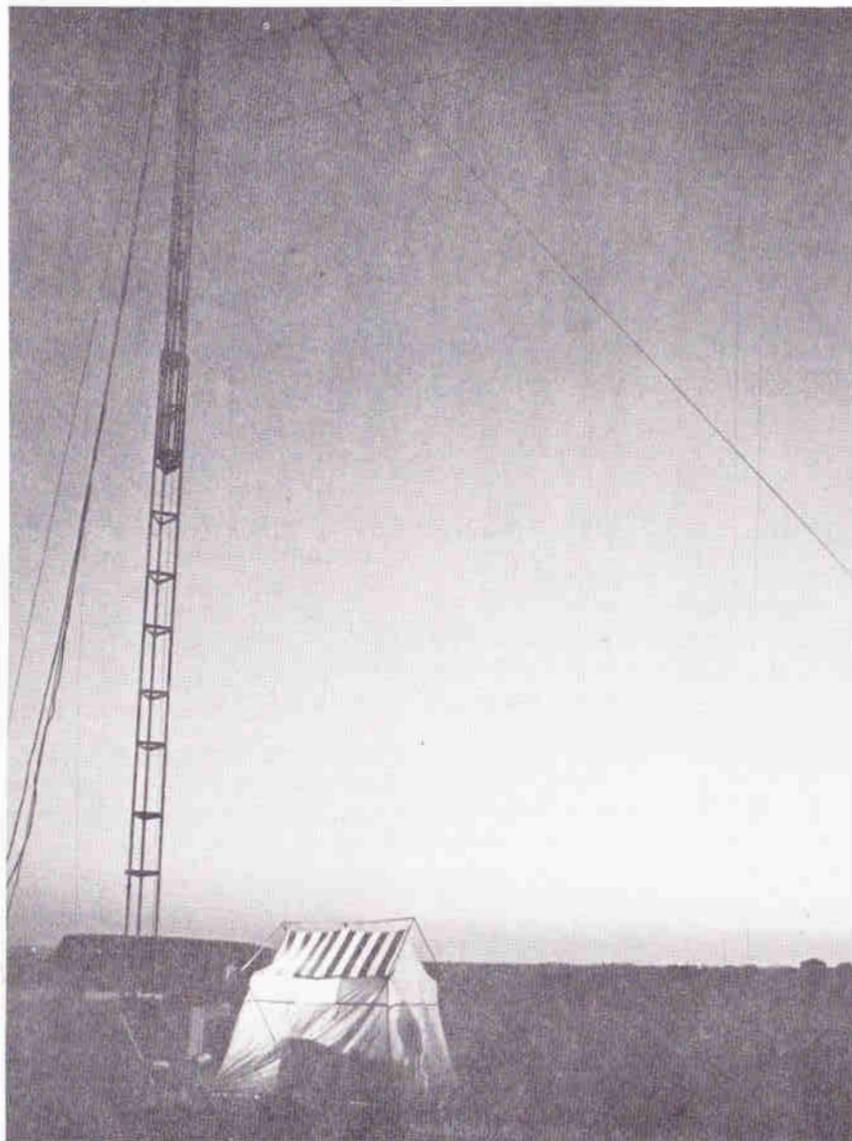
Post Office Box 291 - Downtown Station



Vol. XXV

No. 6

June 1975



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



Next copy deadline: June 20th

Published by  
**AK-SAR-BEN RADIO CLUB, INC.**  
 Post Office Box 291  
 Omaha, Nebraska 68101  
 Editor: Dick Eilers, WØYZV  
 Phone HOME: 397-3999  
 BUSINESS: 342-1402 - EX. 3  
 Associate Editor: John Snyder, WØWRT  
 Phone HOME: 556-1538  
 BUSINESS: 397-3000 - EX. 3761  
 Associate Editor: Ervan Heinz, WAØEEM  
 Phone HOME: 553-2033  
 BUSINESS: 554-2656

**Annual Dues:**  
 Regular member ..... \$7.50  
 Regular member and XYL ..... 9.00  
 Student member ..... 3.50  
 (due and payable each Jan. 1)

New member initiation fee ..... \$1.00  
**Quarterly for balance of year:**  
 Regular member ..... \$2.00  
 Regular member and XYL ..... 2.45  
 Student member ..... 1.00

Cover photo taken during 1974 Field Day courtesy Jim Belt, WAØJIH.

\*\*\*\*\*

### NEXT MEETING

**WHEN:** FRIDAY, JUNE 13, 1975

**TIME:** 7:30 P.M.

**WHERE:** COMMUNICATIONS WORKERS OF AMERICA  
 1920 South 44th Street, OMAHA, NE  
 (Ground Floor Entrance—plenty of parking.)

**PROGRAM:** Frank Wolczak, WAØIWF, has again postponed Repeaters until the July meeting. Instead, he will bring us a photo report on the tornado. This will be by way of both video tape and slides, much of it not yet seen by the public.

This will also be a last minute update of Field Day plans.

REFRESHMENTS — EYEBALL QSOs — VISITORS WELCOME

\*\*\*

(This issue of Ham Hum is being released early in order to give you the ARRL Board actions on Docket 20282. Several articles are in process of preparation regarding our tornado activities. These will be brought to you in the next issue.)

\*\*\*\*\*

## ARRL BOARD ACTIONS

### BOARD ACTIONS ON DOCKET 20282

#### Nr. 1

Recognizing the need for certain changes in the U.S. amateur licensing structure, MOVED that the Board now consider the proposals comprising FCC Docket 20282.

#### Nr. 2

MOVED, that while the Board endorses the concept of adding a new beginner class of license conveying limited VHF privileges, it rejects the proposal to divide the amateur radio service into HF-only and VHF-only categories for licensing purposes, as well as the proposal to create a new Experimenter class of license.

#### Nr. 3

MOVED, that the license structure set forth by the League's recommendations provide for a single line of amateur license class progression with the following steps: Basic Amateur, Novice, Technician, General, Advanced, and Extra, with the privileges of each to include the privileges accorded lower license classes.

#### Nr. 4

MOVED, that the Board endorses the provision of Docket 20282 creating a new beginner class of license, but that it be identified as "Basic Amateur," and accorded the following privileges and requirements:

1. 145.0 to 145.5 Mhz and 222 to 225 Mhz;
2. A1, A2, A3, and F3 modes;
3. power input not exceeding 50 watts;
4. written examination the same as the Novice class;

5. ability to recognize Morse Code characters, but with no speed requirements;
6. examination administered by two proxy examiners of General class or higher;
7. license term of 5 years non-renewable, reobtainable without mandatory time lapse upon re-examination by proxy examiner;
8. call sign to have a distinctive prefix, with the suffix to be retained upon upgrading to another class of license.

#### Nr. 5

MOVED, that there be no change in the privileges of the Novice class license as to available frequencies, mode, and available power, except that:

1. power to be determined by the same method as that used for other classes of licenses;
2. the license be granted for 5 years, non-renewable, reobtainable without mandatory time lapse upon reexamination by proxy examiners;
3. the Novice license holder be granted all privileges of the Basic Amateur license class.

#### Nr. 6

Moved, that there be NO CHANGE in the following privileges of Technician Class licensees: available modes, transmitter power, license term or renewability, and the holding of special station licenses such as club, repeater, control, auxiliary link, and space station; that the following additional privileges be granted: all authorized amateur frequencies above 29.0 Mhz and all privileges authorized

to the Novice Class; that there be no change in the renewability of present Technician (C) licenses; and further, that both the code test and the written examination for *new* Technician Class licenses shall be administered on the same basis as General Class.

**Nr. 7**

Moved that there be NO CHANGE in the following privileges of General Class licensees: available frequencies, modes, transmitter power, supervision of mail examinations, the holding of station licenses such as club, repeater, control auxiliary link, and space station licenses, and further, that the General Class license convey the following ADDITIONAL PRIVILEGES: All operation in the 50.0 - 50.1 Mhz segment.

**Nr. 8**

MOVED, that there be NO CHANGE in the following privileges of Conditional Class licensees: available frequencies, modes, transmitter power, the holding of station licenses such as club, repeater, control, auxiliary link, and space station, and license term or renewability: that Conditional Class licenses be issued General (C) or General (D) licenses, as appropriate, as proposed in Docket 20282: that *new* General (C) licenses be non-renewable, but that *new* General (D) licenses be renewable upon application; and that there be no requirement for mandatory re-examination of present holders of Conditional Class licenses should their legal residence, mailing address, or station location change to within 175 miles of an examination point.

**Nr. 9**

MOVED, that the Board concurs with the FCC proposals not to reduce

Advance Class privileges; but the Board recommends retention of existing power and frequency privileges, and further, that the holder of an Advanced Class license be able, at his option, to apply for a preferred "1x3" call sign.

**Nr. 10**

MOVED, that the Board concurs in the following FCC proposals relating to the Amateur Extra Class license: the issuance of a lifetime operator license to anyone attaining Extra Class status, and the change in name of the class of license from Amateur Extra to Extra; but that there be no change in the following privileges of the licensees: available frequencies and sub-band exclusivity (except for recommendations adopted earlier in this meeting) and transmitter power; and further, that the written examination for upgrading from Advanced to Extra Class be retained.

**Nr. 11**

Moved, that the comments filed by the ARRL on Docket 20282 include a recommendation for the following restructuring of amateur code speed requirements:

Extra Class: 20 words per minute

Advanced: 15 words per minute

General: 10 words per minute

Technician and Novice: 5 words per minute

with the holders of current General and Advanced Class licenses to be given credit for 15 wpm code proficiency.

**Nr. 12**

Moved, that the League's comments in response to Docket 20282 reject, except for the Novice and Basic Amateur Classes, the concept of trans-

mitter power level as an incentive device.

**Nr. 13**

Moved, that the method of determining power level in the amateur service continue to be based upon plate power input in lieu of peak envelope power output.

**Nr. 14**

Moved, that the Board concurs in the proposal to increase from one to two the number of volunteer proxy examiners required for the administration of mail examinations, neither of whom shall be related to the applicant.

**Nr. 15**

Moved, that the Board concurs with the Commission that no presently-licensed amateur should be forced to change his call sign to reflect class of license, and further, that any system of prefixes to identify class of operator license should be limited to the Novice and Basic Amateur levels.

**Nr. 16**

Moved, that the comments submitted by the ARRL in Docket 20282 request that the holders of the former Amateur Extra First Class license be given credit for the Amateur Extra Class written examination.

\*\*\*\*\*

## RECENT CONTRIBUTORS

### Repeater Fund

Robert A. Conley, WBØLYU  
Lee Hollingsworth, WBØOLP

Thanks for the contributions!

\*\*\*\*\*

## MEMBER NEWS

Dear Sirs:

Everyone says I should have it put in Ham Hum, so I think I will.

According to May QST SS results, I was the top Novice SS operator in the State of Nebraska. Also, on page 57, it shows the top 10 in the nation plus 10 other winners. Since I am one of these, I am also in the top 20 Novices in the nation. I had a score of 10,440.

TNX - Jon Taute, WNØMNK  
2314 South 40th Street  
Omaha, Nebraska 68105

(Ed. Note: Congratulations, Jon, on your fine achievement!)

\*\*\*

Dear Ham Hum:

Murphy's Law has struck me again. I just got a power supply for a Heath HA-201 RF amp and my Drake TR-22 quit transmitting, but it was repaired.

Charlie, KØQVL/Ø  
\*\*\*\*\*

## FIELD DAY 1975

Make your plans now to join in the fun by participating in Field Day - June 28 through June 29 - at Beau Crest, the Bowen farm south of Papillion. Map included in this issue for directions to reach the site.

Field Day Chairman is Dick Harper, WBØMWB, assisted by Frank Wolczak, WAØIWF. Contact them and offer your assistance. If you can't work, go to the site to visit. The eyeball QSO is an important part of Field Day!

\*\*\*\*\*



## TORNADO ACTIVITY

We quote letter to Bob Lockwood, WAØDHU, Douglas-Sarpy County AREC, from Art Gaeth, WØFQB, Secretary of the Nebraska Chapter, Quarter Century Wireless Association, Inc.:

May 11, 1975

Robert C. Lockwood, WAØDHU  
Douglas-Sarpy County AREC  
3711 North 56th Street  
Omaha, Nebraska 68104

Hi Bob:

Enclosed you will find three (3) street directories for the City of Lincoln which may be of some future value in operations in the event that city should suffer some type of calamity requiring communication services from our area.

After some thought and discussion with WØJDJ of Lincoln following our tornado activity, he forwarded their street directories for your file and/or base stations. Perhaps it might be advantageous to have similar street directories for Council Bluffs, Bellevue, Papillion, Ralston, LaVista, Fremont, etc. on file at your headquarters.

As perhaps you are aware, we did establish alternate base stations for the Omaha Red Cross Chapter having to do with H & W as a backup for WØCQX which did assist in reducing the load on that station.

For example, WØKH, WØYMU, WAØZKW, and I operated as alternate base stations on 3975 Khz along with WAØKHF at ISU in Ames, Iowa, and had liaison with Red Cross Chapter  
Page 8

Amateur Stations in Denver, Kansas City, Minneapolis, Des Moines, Wichita, Oklahoma City and others. We handled over 450 H & W messages during the emergency via these alternate base stations.

This reduced the load factor considerably at WØCQX. For example, I show a total of 166 inquiries at my station and of these 96 were advised that the QTH was *not* within the tornado area; the remaining 70 were relayed to WØCQX for mobile checkup service and eventual report back to originating Red Cross Chapter in or out of state.

From my observation, all services did an outstanding job and should be congratulated for a job well done. CONGRATS!

73,

Art Gaeth, WØFQB

Secy., Nebr. Chapter QCWA  
\* \* \*

I wish to take this opportunity to thank those mentioned in this letter and the many others who gave so much time and effort during this trying period. An outstanding job by all. A sincere, deep thank you to these devoted people.

Robert C. Lockwood, WAØDHU  
Douglas-Sarpy County AREC

\* \* \*

One thing we were most thankful for during the emergency period is the outstanding performance of the WRØABQ repeater. This unit was under continuous operation 24 hours a day for seven days. Not once did it fail — just ol' dependable.

We must not, however, take it for granted. It takes many hours of time to maintain this unit. It is a Club project, not one for a select few. The mission we found ourselves involved in couldn't have gotten off the ground without our repeater.

We must, therefore, sincerely thank those responsible for our repeater upkeep and should get more involved ourselves. WRØABQ truly was ol' faithful.

By - WAØDHU  
\*\*\*\*\*

### WANTED

GUD CW-Phone OPS for the '75 20-meter Field Day Shack. Contact Joe Nanos, KØKES, at the meeting or Jon Taute, WBØMNK, at 556-6695 or at the June meeting. Remember, CW QSOs are fun, more challenging and count as two QSO points this year.

TNX - Jon Taute, WBØMNK  
THE Mighty Nice Kid  
\*\*\*\*\*

Always enjoy reading "Ham Hum."

Here is a way to square a circle.

### ENJOYED AUCTION!

Dear Sir:

Would you please send me an application to join your Radio Club. I have attended a few meetings over the years and at least three Club auctions including the one this year. I never enjoyed anything so much. Hope you continue each year on Sunday afternoon.

I intended getting an application at this year's auction but forgot it. Thanks - keep up the fine work!

Jack Branstiter, Jr., WØGJM  
Brock, NE 68320

(Ed. Note: Thanks for your kind words, Jack. A membership app is on its way to you.)

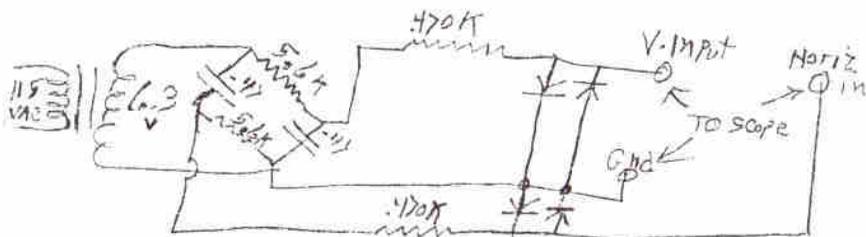
\*\*\*\*\*

SIGN OF THE TIMES—On the rear of a truck: "Don't Insist on Your Rites!"

— Service

\*\*\*\*\*

Dick Bowman, WØWZR  
1115 Potash  
Alliance, Nebr. 69301



\*\*\*\*\*

## OTHER REPEATERS: CHICAGO CALLING

Autopatch repeaters aren't exactly new in Chicago, but the birth of a new one in Northbrook seems to have spurred much interest recently, and also many questions about just what autopatch is and how it works. So this month we will take a look at the four area repeaters that offer you a phone in your car.

Briefly, an autopatch is an automatic phone patch that operates in conjunction with a repeater. It consists usually of a touch-tone pad encoder on the mobile end and a decoder on the repeater end. To make a call, the mobile station transmits an access code consisting of several digits which connect the repeater audio to a phone line. The mobile then dials a phone number as if he were dialing an ordinary telephone. He hears the phone ring and carries on a conversation as if he were talking on the repeater. When the conversation is over, the mobile transmits another touch-tone number that disconnects the autopatch.

Most autopatch repeaters across the country follow the basic format described above, but there is some variety in the refinements. Some patches have a timer that limits a call to a few minutes. Others have a timer that resets every time the mobile transmits, but time out if there is no transmission for about thirty seconds. That protects the mobile in case he drives out of range or has equipment trouble and can't turn the patch off. Some systems do not repeat the mobile, but the telephone voice is heard, providing censorship power to

the mobile. The list of extras is almost endless.

Financial arrangements of the autopatch systems are quite similar. Usually, the cost of the phone line is split evenly among the members. The more members, the lower the cost per member. However, to avoid overcrowding, some repeaters restrict the number of autopatch members. Phone bills run in the neighborhood of forty to fifty dollars a month, which, split thirty ways, means only a dollar or two a month per member. Usually this is in addition to a contribution for ordinary use of the repeater. The systems in the Chicago area all have phone lines that allow calls to most parts of the 312 area code.

Adding a touch-tone pad to a mobile is easier than most people think. It involves a few capacitors and resistors and a 9 volt battery for power. The audio is connected directly to the mike input of the radio. Circuit diagrams are available in the Handbook, and most autopatch repeater operators offer technical assistance in getting your touch-tone pad working. The pads themselves are quite available at hamfests. Western Electric pads (like the one in your Bell phone) go for around \$10 bare, or from \$15 to \$20 in a nice plastic housing. Several other makes are available at prices ranging from \$25 to \$75.

One more point should be made before I go into detail on each Chicago system. It is absolutely **ILLEGAL** to make any kind of business call on an amateur autopatch (except in an emergency). Just what is a business call and what isn't is a grey area subject to some debate on the autopatch repeaters. The FCC has not

# HAM HUM SWAP

FOR SALE: ICOM 230 with Regency P109 AC Supply, both 3 months old — \$395.00.  
Don Sachnoff, WA9BVT; phone 397-5712  
9429 Ohio, Omaha, NE 68134

FOR SALE: I don't remember the last time I wrote but with 6 meters so dead in N. Minn. I've given up trying to continue DXing so for sale is a homebrew Mobiline 6 transceiver 25 watt-6 meter Xtals complete unit. Mobiline used to be a World Radio product is basically simple — ask Al McMillan, WØJJK — HI! Equip. will be shipped prepaid to best offer.  
Jim Knudsen, WAØMHF  
704 Fir Street, Brainerd, Minn. 56401

\*\*\*\*\*

laid down many specific rules on what is and is not a business message.

The phone company doesn't really like autopatches, so use some common sense in deciding who to call for what. Some repeater trustees have a set of guidelines for their users to follow.

de Squelch Tale, Chicago  
\*\*\*\*\*

## THANKS INSTRUCTORS!

Thanks to the Ak-Sar-Ben Radio Club's code and theory classes and their great instructors, my 4th harmonic, John G. Kruse, is now WNØPHN.

Much happiness is at our shack.

Tnx, Ed Kruse, WØGFH  
\*\*\*\*\*

## QSP — WARNING — RAPID PRINTED CIRCUIT BOARD ETCHING

In recent weeks items have appeared in electronic magazines suggesting the use of a mixture of Hydrogen Peroxide and Hydrochloric acid as a rapid etchant for printed  
June 1975

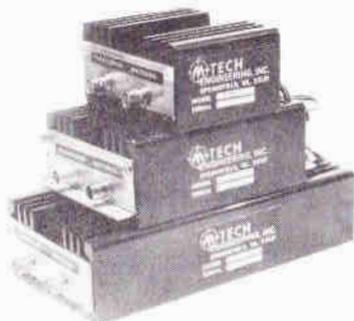
circuit boards. Both chemicals are dangerous in themselves, but when mixed and a copper board added, an exothermic (heat generating) reaction is started which can go into thermal runaway — with explosive results. The results of flying glass and boiling acid on the surroundings (i.e., you) are too horrifying to contemplate.

Even given that the mixture might not explode, chlorine gas may be given off and the results of inhalation of even a small amount are nasty and lasting. (Chlorine was used in WW-I as a poison gas.)

The amateur would be well advised to stick with Ferric Chloride solution as it is safe (provided you don't splash it in your eyes or try to drink it) and stable. At room temperatures with fresh solution, a board should etch in about half an hour and if the solution is warmed, etch times as short as 5 to 10 minutes can be achieved. Do not boil though, as nothing is gained and it tends to spit.

de Amateur Radio (Australia)  
via ARNS Bulletin  
\*\*\*\*\*

## 2-M/FM AMPS



M-TECH AMPLIFIERS ARE DESIGNED & CONSTRUCTED WITH ONE GOAL-QUALITY!!

HAVE A BIG SIGNAL AND FORGET ABOUT SERVICING.

- \*SOLID-STATE TESTED 100%\*
- \*85% OR BETTER DUTY CYCLE\*
- \*VSWR PROTECTED-ANY LOAD\*
- \*STABLE MICRO-STRIP INDUCTORS\*
- \*ONE YEAR FACTORY WARRANTY\*

P15A1: 1/3 IN-12/20 OUT \$55.00  
 P50A10: 2/18 IN-14/60 OUT \$98.00  
 P50A1: 1/3 IN-40/60 OUT \$139.00  
 P100A5: 2/5 IN-60/100 OUT \$198.00  
 P100A10: 2/12 IN-40/110 OUT \$198.00

6 Digit display (1/2" High) reads hours, min, sec, with resets for each. Quick assembly on 2 etched PC boards; size is: (HWD) 2.25x5.25x2.75 in. - 2 LB.

FROM  
**M-TECH**  
 ENGINEERING



MAKE PROFESSIONAL LOOKING PC BOARDS FAST AND EASY

\*SENSATIONAL  
 \*REVOLUTIONARY  
 \*FANTASTIC

### STAMP-IT ETCH-IT



Reduces Printed Circuit Board Art Work From 2 Hours to 10 Min

Simple as A.B.C.

A. Stamp Components on P.C. Board B. Use Pen to Interconnect Lines C. Etch Board

**SE-2 KIT CONTAINS:**

- CONNECTOR FINISHER
- 16 PIN DUAL IN LINE (D) SOCKET
- 10 PIN ROUND (R) SOCKET
- 9 PIN ROUND (R) SOCKET
- TELE TRANSDUCER SOCKET
- TELE TRANSDUCER SOCKET (LARGE & SMALL PIN) PAIR
- RESET SW
- SW PAD
- RESET PIN

**PLUS**

**ONLY \$9.95**

**ADDITIONAL STAMPS:**

Read board stamps for all integrated circuits. Refer to manufacturers' data for requirements.

Only \$2.95 each	four 1971
#1 DUAL INLINE	#2 FLAT PACK
#3 8 PIN ROUND	#4 18 PIN ROUND

24 & 12 HOUR

Clock Kit  
**\$28.95**



### NEW LOW PRICE-2 METER CRYSTALS

Crystals carried for: REGENCY TEMPO KEN WILSON DRAKE (TR22/C) MIDLAND (500 & 505) HEATH (HW202) -- Others Special Order. SPECIFY: BRAND, MODEL & REC-XMT FREQ.

1/4 - \$5.95, 5/9 - \$4.95, 10/14 - \$4.45, 15 - \$3.95, 50/up - \$3.50 per order.

HOBBY INDUSTRY, 16TH & AVE., G., Council Bluffs, Ia. 51501  
 MAIL TO BOX 864, PH. 323-0142

STORE HOURS ARE: TUES. - WED. - FRI. ... NOON TO 5 PM.  
 THURS. ... NOON TO 8 PM & SAT. ... 9 AM TO 5 PM.

AL - WØJK

