



HAM HUN

AK-SAR-BEN
RADIO CLUB
INC.

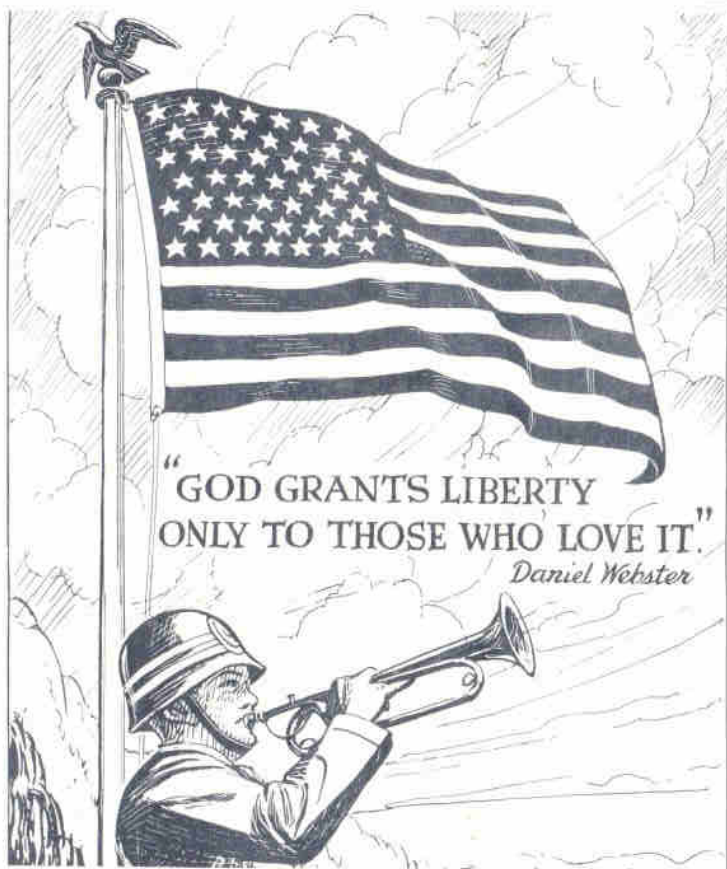
WØEQU

May 1961

P. O. 291

Omaha 1, Nebr.

Vol. XI No. 4



"GOD GRANTS LIBERTY
ONLY TO THOSE WHO LOVE IT."

Daniel Webster

Ham Hum

Published by
AK-SAR-BEN RADIO CLUB INC.
Post Office Box 291
Omaha 1, Nebraska

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.

EDITORS
Al McMillan, WØJJK
Dick Eilers, WØYZV

MAY MEETING

The next meeting of the Ak-Sar-Ben Radio Club, Inc. will be held at 8:00 P.M. on Friday, May 12, at the 4-H Building, Ak-Sar-Ben Field.

PROGRAM

TROUBLE SHOOTING COMMUNICATION TYPE RADIO RECEIVERS

This month's technical series program will endeavor to shed a little light on the proper steps and procedures to follow when the radio amateur finds himself with an inoperative receiver.

A panel comprised of John Snyder, WØWRT, Harold Peterson, KØIJS, Dick Reimund, WØLFM, and Ed Gutmann, WØCQX, will discuss the methods to use in servicing your receiver. The panel will be available for a question period after the regular program and we invite anyone who has a specific problem with his receiver to bring it up at that time.

By Ed Gutmann, WØCQX
Program Committee

Greetings

From the local radio gang at RAF Hemswell and Lincoln England that is. Have visited with some of the local people here in passing and have been invited to attend the local club meetings. One this Wednesday afternoon and one in the evening. Will report on the goings on a bit later. Hope to write some informative articles for the Ham Hum after I have a look see. My gear has arrived but is not set up yet. I have been doing some listening on 40 meters and find it active with not as much QRM as we have. I am enjoying the wx which is smashing. I now have wheels and am looking for Robin Hood and Friar Tuck, their place is not far from here. I have a big 4 BR house on base and am awaiting the family in May, in the meantime I am a bachelor in the RAF mess. Regards to all the gang.

Dave, WØCJW
MAJ. D.A. Hollander
A0877916
DET 6, 99th MMS
APO 327, New York, New York

OMAHA HAMS AND CD

During the practice alert for 1961 the Omaha Hams served in the transmission of messages from Omaha to Lincoln from Friday noon until Saturday noon, April 28th-29th.

A 6 meter transmitter was established at the message center in Fontenelle Park Pavilion. This station sent and received messages to the mobile unit which was located at 41st and Pierce. The messages were then handed to a 2 meter operator, also in the mobile unit, who transmitted the messages to Lincoln using the 2 meter beam located on the Police radio tower. Messages were received from Lincoln on 2 meters, then relayed back to the message center by way of 6 meters.

Operators were set up on four-hour shifts with two operators at the message center and two operators at the mobile unit. This operation gave us some good practice and experience in the handling of messages and at the same time called to our attention certain areas of improvement that are possible. These areas will be studied and an effort will be made to correct and improve our operating techniques. For example, a greater use of the recommended phonetics (alpha, bravo, etc.) would be desirable and practice in the actual transmission of messages would be in order. In spite of these difficulties and in spite

of the poorness of the signal to Lincoln at times, the exercise went off rather smoothly. The help of all those who participated is greatly appreciated. Thanks also to the operators in Lincoln who served for the same period of time.

Civil Defense nets are in operation on 2 meters and 6 meters at the present time. 10 meters will be reactivated soon. For information on 2 meters, call Royal Enders, KØLYO, telephone 391-2681; for information on 6 meters, call Duane Gerry, KØUIA, telephone 453-4889; and to help reactivate the 10 meter net, call Ed Gutmann, WØCQX, telephone 346-3665.

Dear Sirs:

In a letter I received from WØWRT about the selling of a pair of antennas he suggested I have the ad put in your Ham Hum paper.

Would like to sell two Telrex 2 meter 8 element ants. brand new for \$25. Also would like to sell new Johnson SWR bridge with meter for \$35.

Thank you
73 Ross, KØOUL
Ross Looney,
4603 Greenwood St.
Lincoln, Nebr.

Here is the resume of last months regularly scheduled meeting of the Ak-Sar-Ben Radio Club of Omaha.

The Communications Dept. of the Union Pacific Railroad Co. was the host for the entire club at the April 14th meeting held at the Union Pacific headquarters building here in Omaha.

After a brief business meeting, Club President, John Droescher introduced Mr. C.O. Jett, Ass't. Superintendent of Communications for the railroad. Mr. Jett then presented a number of beautiful color slides showing some of the details of the various parts of the communications facilities. Included were some shots of the microwave stations and their emergency standby power supplies, also some shots of the numerous telephone bays and teletype facilities. Mr. Jett also gave a rundown on the uses of the IBM computer and how information and data is stored on magnetic tape.

The group then took a guided tour of the communications floor with the able help of Bob Brenneman, WØUJ who is an Ass't. System Communications Engineer and a veteran amateur in Council Bluffs. Also helping with the tour was Al Akerson, WØVKN, who also is an Ass't. System Communications Engineer. Both of these fellows were very helpful in answering all the questions coming from the group.

The club wishes to express its sincere thanks to these men who made the meeting and tour possible and we hope that we will be welcome again at some future date. Our thanks also to Royal Enders, KØLYO who made the necessary inquiries and arrangements for the meeting.

John, WØWRT

I've finally become temporarily settled out here in San Jose, Cal. Working at Jennings and building 2 rigs 1-50kw Linear test rig and a 1kw plus ham rig. The ham rig is in a box 11x11x6" and used 3-4w300 Bs. It is to be on the cover of a forth coming *New Single Side Band* hand book. What a place to work, all the vacuum condensers and vacuum relays we want! I don't have my six area call yet.

By the way if you will keep on sending Ham Hum I would gladly send some money for the expenses. Please let me know how much.

P.S. Tell John - YVV I'm on the low end of 40 every nite with 300-500W.

73's Bert E. Newkirk, Jr.
WØRYG/6
15207 Chelsea Dr.
San Jose, 24, Cal.

COMMON SENSE THINKING

(by K6YCX de the Modulator)

Do you use a 25 watt receiver with a 250 watt transmitter? That's crazy talk! Who ever heard of rating the performance of a receiver in the same terms as a transmitter. The simple fact remains that the major limitations of any station are most adequately defined in terms of being able to hear the other station. So many times we see a station that uses a large expensive transmitter and a compromise receiver. With an efficient antenna and transmission line the cheapest way to better communications is usually in terms of improving the receiving equipment.

This brings up another point. Did you ever determine how much money every watt of power costs? An interesting comparison is in terms of the Viking Ranger. Compare how much a DB costs us in comparison to the Ranger. In a recent analysis this factor was determined to range from \$40 per DB to \$133. Very often the cheapest way to achieve greater system efficiencies is by improving the antenna and/or transmission line and not by increasing the transmitter power. Nuff said?

Very often simple and cheap units very greatly improve the operation of an amateur station. The most important investment for any station is the VSWR bridge. Buy or build one of these

units and forget all about tuning up the rig using the plate meter (Novice operation to limit input power is the exception). What really counts is the maximum power from the transmitter that can be used by the antenna.

OWENSBORO, KY. -- Does a gun slinger lay his iron down on the table when he's not using it? No, he shoves it back in the holster.

Taking this tip from TV westerns, electronic service experts at General Electric's distributor sales headquarters have come up with a "holster" type soldering gun holder as a new aid for radio and television technicians.

FOR SALE: G-50 in good condition. Call Duane Gerry, KØUIA, res. tel. - 453-4889.

FOR SALE: BC-610 F, Homebrew 75 watt Xmtr., RBM receiver TCS Xmtr and receiver with mobile and fixed power supply. Two BC-614 E Speech Amps. Best offer for each item gets them.

Gary, WØUKA
2606 N. 81 Street
Phone: 391-2007

ANTENNAS FOR THE VERY POOR

(W6QLB de the Modulator)

Twin-T for 40 & 80

Actually, this one is not new. However, the art of "wire bending" is no longer practiced like it once was. The "Twin-T" is not critical in its design and rumor has it that wooden spacers are better than the more expensive ones. On 40 meters the flat-top is a 7mc dipole with the ends bent back to reduce the overall length to one quarter wave-length. The feed-point impedance is about 6000 ohms, thus illustrating that this is not a doublet or folded dipole. The vertical portion acts as a 450 ohm quarter-wave transformer to match the 52 ohm coaxial line. On 80 meters the antenna resembles a top-loaded vertical radiator fed in one leg. The loading effect is provided by the horizontal portion. It does very little actual radiating. As with all vertical antennas, the best operation is obtained by using

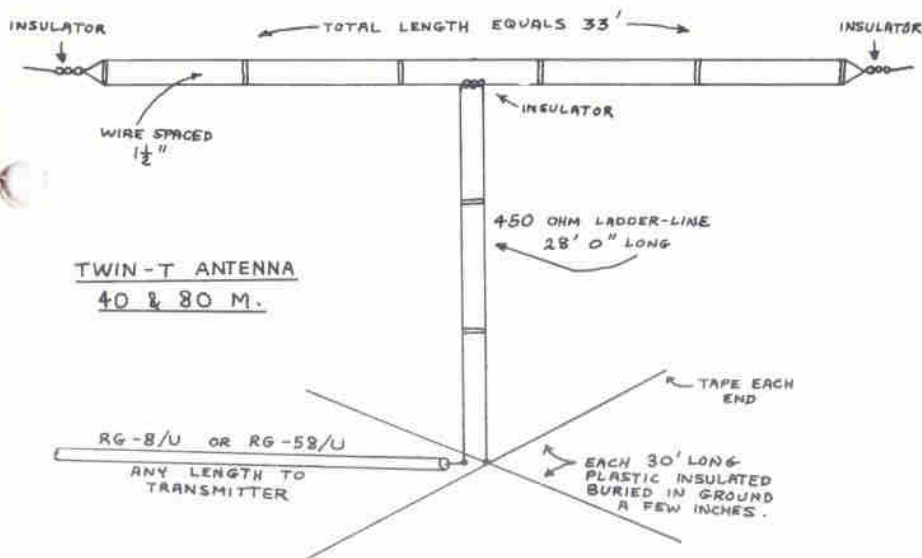
the artificial "ground" or counterpoise.

Just a word about construction, too. This antenna can be made with almost any kind of wire but copper is best. Usually, it is a good idea to pre-stretch the wire that will be used in parallel lines. Measure it out while it is under tension between two trees. The insulators can be made of wood. It would be best to soak them in varnish for an hour and then put them out to dry. (Soak them after drilling the holes). The counterpoise is made from the kind of plastic covered wire used in tract houses (about number 14 or so) and the ends are securely taped against moisture. While this system is at "DC" ground potential, it should not be in "DC" contact with the earth. It is an artificial ground. (Ref: "S-9 Signals" by Wm. I. Orr. Radio Publications, Inc.)



**Safety
Pays**

Always be on your guard when driving. YOU may have the right of way BUT the other guy may have a truck!



WHAT'S NEW

(de W6QLB de the Modulator)

Just a word about the "Nuvistor" for those who aspire towards better reception in the VHF world but suffer from the proverbial "champagne diet, beer income." This is a type of tube. The most popular for ham work is the 6CW4. In plain language, it is a low noise triode in a special sort of "subminiature" class. In ham equipment it has proven to be slightly superior to the best 417-A bottles and just under the performance of the fabled 416-B tubes. Because the Nuvistor was developed for mass use in television, it is quite cheap. Yet, it is possible to use

it in a preamplifier configuration and bring the noise figure of your present receiver down to 3.2 or so. Its lower transconductance (just half that of the 417-A) makes it more stable with little loss in gain. (Remember, it is the ratio of transconductance to plate current that determines the noise figure of a tube. For further information, see:

QST, September 1960, p38, "The Nuvistor as an RF Amplifier at 144 mc", Tilton.

73, January 1961, p8, "Nuvistor Converters for Six and Two, Tom Lamb.

I BEEN THINKIN'

(de Auto-Call)

Saw an article the other day about a machine for hanging wall paper...it could be operated by using only one hand!

Now, dang it, inventions like this can sure bust up a lot of sayings we've been used to usin. For instance, what are we gonna substitute for "busier than a one armed paper hanger?" Why, with this machine a one armed paper hanger is going to be no different from anyone else.

I suppose the next thing you hear tell of will be a machine to dig wells and then we won't have access to that phrase about how cold it is...since there won't be any well diggers. And if somethin like that can happen they're liable to invent a non-skid roof which even a cat can take his time on.

No sir, I just can't go along with this fast progress we've makin this day and age.

Relievin people of hard labor has give em more time to think and that's going to be more dangerous as time goes along because by and by people are going to think up labor savin devices to the extent that eventually will do away with thinkin!!

It used to be you had to at least tum a handle to get out of your car but now they got one with just a little button you push and the door is unlocked. However, you've still got to push it

open and step out...now I'm waitin for some smart alec to come along with the kind that all you do is LOOK at the door like you wanted to get out and it'll fly open and a mechanical boot will kick you out to the sidewalk. That ought to leave you just enough energy to stagger into the drug store for some vitamin pills.

Remember how you used to go into the bowlin alley and there would be a man up on a tall chair hollerin out the fouls? Well, they got little lights that do the same thing now, only when you foul, a bunch of bells start ringin. First time that happened to me I thought them Rooshians was on the way and I started for the bomb shelter (dropped that damn ball right on my corn on the way out!)

Well sir, our automatic kitchen has jest sounded off indicatin that supper is ready and the TV set is due to go on any minute so I'll see you folks next month.

The Old Red-head



"Have you got a mirror? I'd like to see how I look in it."

**YOU CAN
MAKE IT!**

AND

**WE'LL
BE GLAD
TO SEE YOU!**

IN

OMAHA

OCT. 7-8 '61

The Midwest Division Convention of the American Radio Relay League will be held at the Sheraton-Fontenelle Hotel in Omaha, Nebraska on October 7th and 8th, 1961.. Your host, Ak-Sar-Ben Radio Club, Inc.

**START NOW BY MARKING YOUR
CALENDAR WITH RED CIRCLES
AROUND OCTOBER 7 AND 8**

VIEWS AND COMMENTS

By: Owen "Blank" Blankenship, W3ENU

23 Greenwood St., Odenton, Md.

(de Auto Call)

"Jumping to Conclusions"

I once attended an affair which consisted of a series of programs throughout the afternoon and evening. As we were lined up waiting to march into the auditorium, several of us noticed an individual sitting on the floor against the wall with a fifth of whiskey. He was minding his own business and was relatively quiet. However, all of us agreed that this sort of thing was definitely out of place at such an affair. At just this moment, a General Officer chanced to pass by and noticed the episode. In words that were clearly understood, he told the drunk to "git". "Boy, I thought to myself, "that fellow will sure catch hell Monday morning." Later in the program the same drunk interrupted the ceremonies with boisterous language and was physically ejected from the room. Everyone felt a bit embarrassed by the occurrence and there was no question that each person present would gladly have wrung this character's neck. Just as the program was coming to an end, the General (who was NCS-ing the affair) told us that he would like to present to us an individual who deserved a world of credit

for a hard day's work. He then called this same "drunk" onto the stage (who, strangely enough, was stone, cold sober) and told us: "This was to teach you an important lesson...never jump to conclusions, nor judge individuals from what you see at first glance". The whole thing was a carefully planned thing...the "fifth" contained ice tea, the "drunk" was an upstanding man...and we learned our lesson.

So often I hear an individual who seems compelled to spout forth words of wisdom based on a conclusion he has arrived at from facts obtained third hand. For example: The other day an individual told me that "overseas, a person could become a MARS member without being a licensed amateur." He had several "facts" to support his statement, but unfortunately each fact supported a different proposition and was not related to his conclusion.

And then there was the time I heard another individual say that W3___ was never on the air unless he was drunk. "Just listen to him, you can tell by the way he talks." Yes, the fellow in question did talk in a peculiar manner—and for a reason, for he

was living on borrowed time. It seems that he had had polio which had damaged his voice box and the poor guy could barely make himself understood by using gutteral voice. He died a few months later at an age of 19.

Another conclusion that we often hear advanced is the one that "all novices and technicians are lids". To support this conclusion we are told that "they can't copy C.W., they fill the bands with lousy sounding signals, and that their QSO's are not of the dignity expected on the ham bands." First of all, some Novice and Technicians probably do fall in this category....but so do several General and Advanced class license holders too. I'm sure you can name several Novices and/or Technicians who are outstanding amateurs.

We jump to the conclusion that all Citizen's Banders are lids of the first order, serve no useful purpose, and should be shot at sunrise. Why? I'll tell you why; because they get their licenses for "free", sound like a bunch of third rate hams, and can use the 10-signals. But wait a minute: do all of them fall in this category? Nope, of course not. Again, because of a few, we are pre-judging many who use the CB for its rightful purpose.

Being humans, we are often trapped into jumping to a conclusion as a result of our intuition, or because of a first glance. A valid conclusion cannot be

arrived at in an abstract manner. Webster says of *conclusion*: "... a reasoned judgment ... to reach as an end of reasoning ... the last summing up of a discourse ... to decide ..." To conclude we must reason. To reason we must consider facts - not just one fact, but as many as pertain to the subject. To pass judgment requires considered reasoning.

And finally, "Judge not that ye be not judged." (Matthew 7: 1).

73, Blank

OFFICIAL BULLETIN NR 795
FROM ARRL HEADQUARTERS
WEST HARTFORD CONN
APRIL 6 1961 TO ALL RADIO
AMATEURS BT

The Federal Communications Commission has issued two notices of proposed rule making, as follows. Docket 14025 to permit an applicant living temporarily outside the United States to take an examination for a Conditional Class license even if his residence in the U.S. is less than 75 miles from a legal Commission examination point. Docket 14026, to permit maritime mobile operations in the band 14 to 14.35 Mc on a world wide basis. Final comment date on both proposals is June 1. Full details will appear in May QST
AR

Here is an article I ran across on the subject of Tungsten which might be of interest to folks reading Ham Hum.

John, WQWRT

(from Technician-Engineer)

In this electronic age, the vacuum tube is the heart of virtually all electrical devices. Tungsten in the pure metal form fills the bill as no other substance does.

The foundation of electronics was Edison's discovery in 1883 that when a metal is heated to a high enough temperature it gives off a stream of electrons. These electrons enable a vacuum tube to function as a rectifier, amplifier, modulator, or detector. To turn Edison's discovery into a practical electronic tube a metal was needed which had an extremely low rate of evaporation.

Tungsten filament alone met the requirements, and, until the recent discovery of germanium's properties as a transistor solid, was the indispensable building block of all electronic devices.

Without tungsten filaments, the world's electric lights would fade. Radio and television tubes would go dead.

Tungsten components are used in distributor points of automobile engines, in telephone systems, radar, and navigational aids. Tungsten alloys stand up under the white heat of howling jet engines. Others help aviation break the heat barrier - supersonic speed at which most metal warp.

The building block of electronics . . . **TUNGSTEN**

Tungsten carbide drills probe for oil, ream out dental cavities (with little pain), and put hair-size holes in the gears of ladies' wrist watches.

A dense, silvery element, once thought to prey, wolflike, on other metals, now helps shape the destiny of nations.

Tungsten always occurs in combination with other minerals. Separated, it withstands more heat than any other metal. As tungsten carbide it ranks second to the diamond in hardness.

Such qualities are vital for tools of high-speed production, for electronics, and for weapons, says the National Geographic Society.

Tungsten's early reputation as a nuisance stems from 16th century English miners in Cornwall. They were positive that one of its mineral forms, a brown-black ore, devoured good tin. Hence the ore's name, wolfram, or wolframite.

The other chief tungsten-bearing mineral, scheelite, was named for the Swedish chemist, K.W. Scheele, who first isolated tungsten in 1771.

Though tungsten's characteristics had been demonstrated by the time World War I broke out, only Germany saw its strategic potential. The Kaiser's tremendous war production caught the world off balance. It was made possible by high-speed, tungsten-steel tools.

Germany took another trick during World War II, putting tungsten carbide cores in armor-piercing shells. Fired from tanks, they sliced through opposition armor and almost won the North African campaign for Hitler.

Since the war, tungsten has played an increasing role in industrial growth. Alloyed with steel, it can cut hard substances at high speed without distortion. So it helps boost production rate, lowering the cost to manufacturer and consumer.

United States tungsten mines dot the Rocky Mountains and Sierra Nevada. A big eastern mine produces ore on land once owned by the Jefferson Davis family in North Carolina. But domestic resources of the mineral barely meet industry's increasing demands. Prospectors are encouraged to look for more.

South America, Canada, and Australia have important wolframite and scheelite mines. But the biggest pockets of ore have been reported in Asia, mostly in Communist China.

One huge deposit of tungsten lies in South Korea. A few miles below the 38th parallel, this deposit is just out of reach of Red Korea, where the peninsula's iron ore is concentrated, and where most of the important metallurgical works are operated.

**OFFICIAL BULLETIN NR 798
FROM ARRL HEADQUARTERS
WEST HARTFORD CONN
APRIL 28 1961 TO ALL RADIO
AMATEURS BT**

May QST mentions ARRL's adoption and support of Project Oscar. Tests are in progress in which satellite communications equipment is being flight tested with the collaboration of local amateurs. Word received from Project Oscar committee members indicates that a prototype version of the phase one Oscar beacon package was successfully test flown near Mt. Diablo California in a light aircraft on April 9. Preliminary signal reports on 145 Mc were good, with reception reported as far away as Santa Maria, about 190 miles. The assistance and interest of all stations participating is appreciated by the Oscar Committee AR

Dear Mabel,

Concerning your answer in November of Moe Bealabout Clyde's trouble with home brew. Back here the only problem is the sheriff now has a helicopter and have sure lost a lot of valuable equipment. BUT, we keep trying!

Home Brew

Dear Home Brew,

Goodness, you know that home brew remark changed an awful lot of things around here. Clyde was certainly surprised at the large number of diagrams he received. They must have been marvelous because he remarked that "those boys up in the middle of the state are old-time experts. Sure wish I had a good spring."

You'd think he'd have one in that mess of stuff in the shack.

After studying the various diagrams and having a few consultations with the boys, he decided which rig to build. He bought a lot of equipment and everybody seemed eager to help. Even some of the fellows who have never repaired their own gear came over to "get the new outfit fired up" as they expressed it...the true spirit of ham radio.

Of course I can't give you a technical report on their progress but I do remember that on about the fifth day somebody said the stuff was beginning to work and they all got real busy. And then Clyde told somebody he was getting plenty of output from that little copper tube.

You know, there had been some tension in the club sometimes but when they began holding meetings out in Clyde's laboratory the whole atmosphere changed. They sang and laughed even when the smoke poured out of the windows. It would have done your heart good to hear them.

I remember the day they got on the air for the first time. Four of the boys had just driven up when Clyde ran out to them and said, "Man, It's LOADED!" They pounded each other on the back and snickered and winked and almost ran into the shack. Guess we had the most active hams in Florida that night.

Seems like they must have had some trouble with spurious signals because last week two investigators came here. We were not home but they talked to Mrs. Twern next door. Clyde got upset when he heard about it, he hates those pink tickets. The boys loaded the rig on the back of Herman's truck and headed for the Everglades. They say they have gone mobile.

So thank you one and all for your help. If ever you see a moving column of smoke out in the sawgrass you'll know it's our radio club operating their new mobile rig. They couldn't have done it without you.

It's things like this that further the reputation of amateur radio, Sort of chokes you up doesn't it?

Love Mabel

OFFICIAL BULLETIN NR 796 FROM ARRL HEADQUARTERS
WEST HARTFORD CONN APRIL 13 1961 TO ALL RADIO
AMATEURS BT

All amateurs located in the ARRL field organization, individuals as well as clubs and groups, are invited to participate in the annual Field Day June 24 and 25. This annual exercise of emergency powered equipment is the ideal time to test gear such as

generators, batteries, mobiles and portable rigs. Convenient log forms and summary sheets are now available on request from the ARRL communications Department, 38 La Salle Road, West Hartford 7, Connecticut. Official rules will appear in June QST AR



Stop Worrying **GET THE FACTS**

JOIN

THE AK-SAR-BEN RADIO CLUB INC. - ONLY \$6.00 PER YEAR, RECEIVE HAM HUM, ATTEND REGULAR MEETINGS AND HAVE FUN AS A COMPETENT OPERATOR.

I, _____, WISH TO APPLY FOR
MEMBERSHIP IN THE AK-SAR-BEN RADIO CLUB INC.



Signature

Call

Address

City and State

TEAR OFF AND PASTE ON ENCLOSED REPLY CARD

AK-SAR-BEN RADIO CLUB INC.
P.O. BOX 291
OMAHA, NEBRASKA

NEXT MEETING
AK-SAR-BEN 4-H BUILDING
AK-SAR-BEN FIELD
MAY 12, 1961
8:00 P.M. SHARP