

HAM HUM

AK-SAR-BEN
RADIO CLUB
INC.

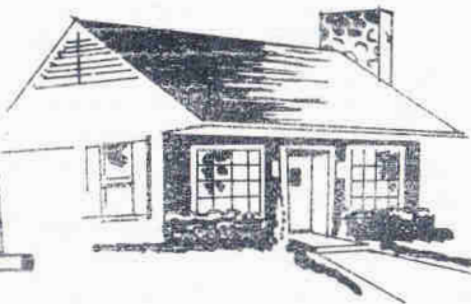
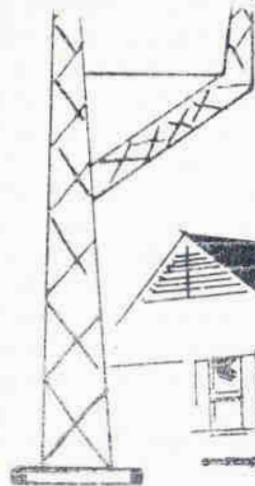
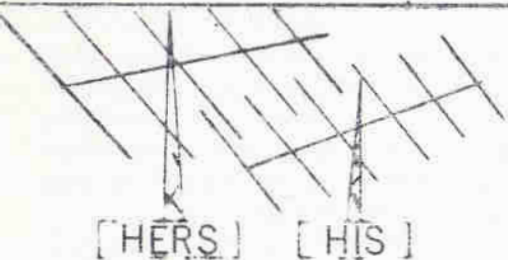
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April 1959

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Ham Hum

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EDITORS
Al McMillan, W0JJK
Dick Eilers, W0YZV

PROGRAM

The next meeting of the Ak-Sar-Ben Radio Club will be held April 10th, 1959 at the 4-H Building, Ak-Sar-Ben Field, at the usual time of 8:00 P.M.

As some of you no doubt heard, through the kind offer of the I.R.E. we had planned a joint meeting for the purpose of hearing Dr. Kostas. This meeting fell through due to the inability of Dr. Kostas to arrange his schedule to include Omaha. No doubt this can be arranged for a later date.

The program for April should be most interesting to all of our members and guests as it deals with transistor power supplies. Royal Enders, K0LYO, will give us the dope on them in, as he says, "plain language." Royal has had considerable experience with these new little gadgets in connection with his work with United Motors and is in a position therefore to really give us the lowdown. Be sure to bring along with you all of those many

questions you have in the back of your mind regarding transistor power supplies as Royal is in a position to answer them.

In addition we will have the third and last part of the discussion of Oscilloscopes by Cecil DeWitt, W0RMB. So while you are at it, bring along your questions here.

While you are bringing all these questions, don't forget to bring that guest, the friend who might be interested in Ham radio or who already is, as he will appreciate your effort on his behalf; and don't forget to invite that new Ham in your neighborhood as he may not know about the Club. I'm sure you have all noticed the many many new vetercal's and beams blossoming up all over town. Why not stop in, rap on his door, and find out who he is and bring him along with you. Most of the cars coming to meeting have an empty back seat and the additional weight will not require much more gas.

SINGLE SIDEBAND...Part 11

Shown here is the VFO and the VFO mixer. The VFO operates from 550 to 1050 kc. This frequency range was chosen in the interest of stability. C52 is a 365 uuf air variable, similar to those found in broadcast receivers, and C53 is a ceramic trimmer, used as the bandset capacitor. A good dial is recommended for the exciter. The Millen 10035 dial has been found to have an adequately slow tuning rate and the smooth action necessary in this type dial. L1 should be wound on a ceramic form if possible, or otherwise on a clear phenolic form. The "TC" letters referred to for C49, C50, and C51 refer to the Centralab temperature compensating capacitors. If after the VFO is built it is found to drift higher in frequency, change C51. Use the same value of capacitance, but change the temperature compensation characteristics. The T.C.L. unit specified here loses 1500 parts per million per degree centigrade. Or if the capacity were 1 uf and the temperature changed 10C, the capacity would decrease 1/1500. Other compensation available in this series include N750 (type TCN), N330 (type TCA), and zero (type TCZ).

If the VFO should drift lower in frequency change the compensation characteristics of C-50 to TCA, TCN, or TCL. Before the drift is checked the exciter should be allowed to warm up for at least 15 minutes. The correct temperature compensation is obtained by experiment, and the results obtained are well worth the time spent.

Not shown on the diagram is the bypass capacitor for the filament of the VFO oscillator. A .01 uf ceramic capacitor should be placed directly across the filament at the socket. The VFO tuning components should be placed inside a separate shield box. This could be a 3x4x5 inch minibox. These components would include L-1, C-47, C-48, C-50, C-51, C-52, and C-53. The fixed compression trimmer that comes on the side of C-52 should be removed, and C-50, C-51, and C-53 placed directly across C-52.

The VFO circuit will be recognized as the familiar Clapp circuit, and was chosen for its inherent stability. To provide more isolation from the frequency determining circuit the triode section of V-15 was used as a cathode follower. Since the cathodes of both the triode and pentode sections of

(Continued on next page)

V-15 are connected together the mixer section is fed automatically. The cathode resistor of V-15 should not be bypassed. T-8 is a TV intercarrier sound interstage transformer, and resonates at 4.5 MC. If it will not tune down to 3.5-4.0 MC. place 47 uuf, TCZ capacitors across each winding. If the tuning of the transformer is too sharp and doesn't allow a wide enough bandpass, load the transformer with 4700 ohm, 1/2 watt carbon resistors. These resistors are placed across each winding. The mixer can be aligned and the oscillator aligned and checked for drift by tuning in the signal on any receiver covering the 80-75 meter band. First inject some carrier and tune the signal in on the receiver. Then adjust T-8 to give maximum signal. This is best done with the receiver's AVC turned off and adjusting the R.F. gain control to give about an S-9 reading on the S meter. Then tune the VFO to its lowest frequency, and retune the signal on the receiver. If the signal doesn't fall at 3.5 MC. adjust C-53 so that it does. Then make sure that the VFO will tune high enough to place the signal at 4.0 MC. Now tune the exciter to 3.7 MC and make sure that the transformer, T-8, will peak the signal at this frequency. If it doesn't add the capacitors indicated above and readjust the transformer. Now check the

exciter over the entire tuning range. If the output isn't fairly even across the entire range add the 4700 ohm resistors indicated above. Since the output from the mixer, V-15 is fairly low on the order of volt, it may be necessary to take a wire, with one end connected to the receiver antenna terminal, and lay it close to the mixer tube. If this doesn't bring the output up enough to get usable readings wrap one end of this wire around the plate lead of the pentode section of V-15.

NOTE: If you do not want the VFO included in the exciter omit L-1, C-50, C-51, C-52, and C-53. Instead connect a low frequency crystal, between 550 and 750 kc. from the junction of C-47 and C-49 to ground.

Next Month: The band-switching crystal oscillator and its mixer.

Harlan Bercovici, KØBHT

C42, C43, C44, C45-
-01 uf, 600 volt ceramic
C46-100 uuf, 600 volt ceramic
C47, C48-1500 uuf, 500 volt
silver mica

C49-100 uuf, TCF
C50-50 uuf, TCF
C51-47 uuf, TCF
C52-365 uuf air variable
C53-7-35 uuf ceramic trimmer
centralab 8LOC, or 822BN

CH7, CH8-2.5 mh RFC

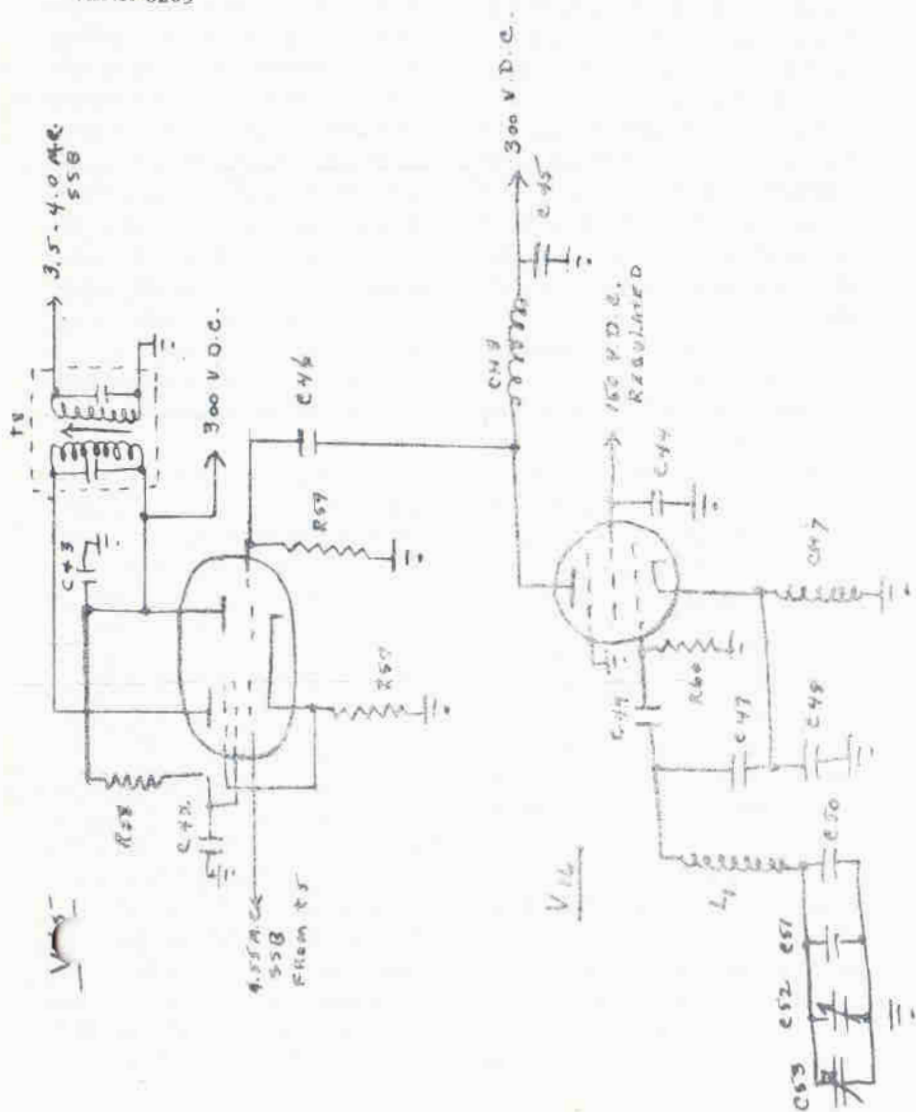
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- R57 - 470 ohm, 1 W
- R58 - 100 K ohm, 1 W
- R59 - 100 K ohm, 1/2 W
- R50 - 47 K ohm, 1/2 W

T8 - 4.5 mc. Interstage,
Miller 6203

- V15 - 6x8
- V16 - 6AH6

L1 - 175 uh, 124 turns, #28
enameled wire, on a 1" Diameter
Form - Length of winding is 1 1/4"



CRIPPLED CHILDREN'S DRIVE

The Mobile Committee has had quite a time trying to plan out the drives lately. Those of you who were in on the drive previous to this last one will recall that we had 15 mobiles in the field and very few calls. Feeling that this was not the right way to handle things, the matter was discussed with the Crippled Children Drive Chairman and it was decided that we did not wish to have more mobiles than necessary in the field and that we could get by with six. What happened? You guessed it - 150 messages were handled by personal pickup of money from captains and in addition a pickup from the fire barns. As we had originally planned, only 6 mobiles turned out. These 6 did a fine job in handling this big load and in addition several cars were pressed into service to make individual collections and the job was completed.

The situation has been discussed at quite some length and the only solution appears to be that we must have better planning. We must be able to be on an alert basis so that we can call more mobiles should they be needed and likewise must be ready to release mobiles should they not be needed. In other words the intent is to handle each of these drives on

a basis whereby each mobile can have a comfortable job to do - one that will not tax him and likewise one that will not be a matter of just sitting there using his gasoline for nothing. We are making plans right now for the next one and again it will be a hard job to judge properly so we are going into the alert and release basis mentioned to see if we can perfect it. It should be good practice for use in any emergency at any rate as that is the situation we normally run into where we do not know what will be needed until we get on the ground.

The Crippled Children Drive was handled in the usual fashion insofar as equipment is concerned using a 6 meter link between the headquarters and the net control station.

Unfortunately the number two newspaper (Ham Hum being number one) did not show any credit line for our part in this drive. However those who were in the drive were well aware of the part that we played. Inasmuch as we are doing this as a community service we do feel that the service is more important than publicity. We again have an opportunity to say "We are glad to have been of service."

Bluffs Club

In reading "Sparks," official publication of the Council Bluffs Radio Operators Club, we learn that two of our members have participated in their programs. Hugh Tinley, at the February meeting, gave a brief history of amateur radio and went on to explain the function of the Ak-Sar-Ben Radio Club TVI Committee. This talk was complete with demonstration of radio by a three way 6 meter QSO between Mayor Brown of Council Bluffs who spoke over the facilities of Don Filbert, K0AJ0, and George Winkler, K0QYM. This talk was quite similar to the one Hugh has been giving to the various service clubs throughout the city and perhaps we can prevail upon him to give it to us at our own club meeting some of these days.

The other member participating in the program is Royal Enders, K0LY0, who gave his talk on "Practical Transistor Applications" at the March meeting. You will have an opportunity to hear Royal who is a fieldman for DELCO at our own meeting on April 10th.

From all we have heard the Bluffs Club is becoming quite active and are having 50 or 60 members attend their meetings. The Bluffs Club, as

many of you know, has been an oldtime club having been organized in 1933. And, whereas they have had their ups and downs, they have been in continuous operation since that time. They did not list all of the officers in their paper but we do note that Jim Noland, W0AWX, is the current president. We also note that their TVI chairman is Bill Kent, K0JBR, and there is a man who should know a TVI when he sees one having had considerable experience in reducing his own and who also has had a first hand contact with our Ak-Sar-Ben Radio Club TVI Committee.

Lee Trefl, W0GG, club secretary, has announced an interesting arrangement by the Council Bluffs Club. All new members are given a 90-day honorary membership. Their name is entered on the roster and at the end of the 90 days they can decide whether they wish to continue as permanent members.

NOTICE

The diagram that appeared with the Single Sideband article in last month's issue did not reproduce satisfactorily. It is reprinted on Page 9 of this issue.

VHF News

Plenty of aurora signals on 144 have been coming through lately - aurora on March 26th provided plenty of good sigs from W9, and WQ call areas especially. W9GAB in Beloit, Wis. was putting in vy. strong signal as well as W9ZIH near Chicago and W9LF also in Illinois. Have no reports on 50 mc.

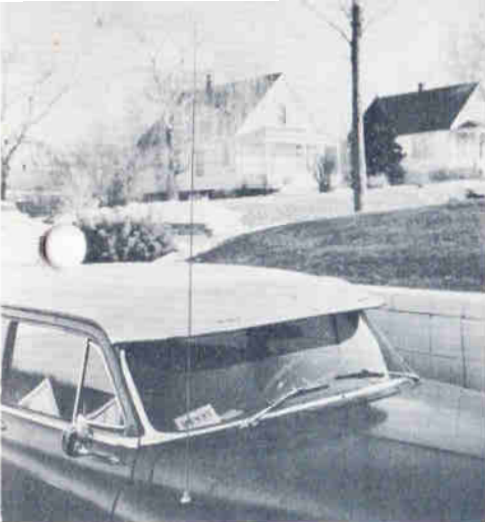
Ever notice all the different types of antennas on top of the Blackstone Hotel building in Omaha? It appears that there are some of these antennas for use in low band (30-50 mc.) and quite a few for high band commercial service..both in the 150 to 170 mc. region but also in the 450-470 mc. range. It would be interesting to know for sure just what services all of these different antennas do represent. Another popular 'antenna site' is the roof of the Teacher's Apartment BLDG. at 39th and Dodge streets. There are other similar areas where you'll find v.h.f. ground planes and stacked coaxials on the rooftops. This points out that right here in our Omaha area, many different services are finding out that the frequencies above 30 mc. do have a lot to offer, not only for the commercial services but for us amateurs as well. It seems to me that the commercial services

are far in the lead in many ways in the uses of the v.h.f. frequencies for both mobile communications and for scatter type transmission.

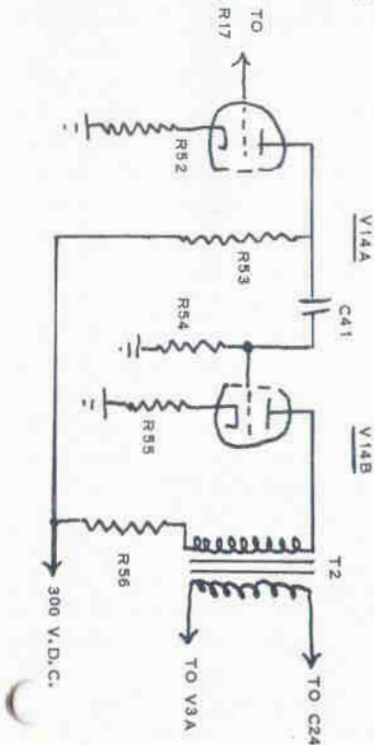
Two new stations heard from on 2 meters in the Lincoln area - Dale, WØLOC and Roy WØHAX, both on with low power and small antennas but still can be worked in Omaha.

Anyone interested in 6 or 2 meter mobile? Here is an antenna that works on both. Shown is a photo of the Ward WCA-143 Disguise antenna. It looks exactly like an ordinary car radio aerial, except mast is a 55½" tapered steel rod which is removable for the necessity of entering low garages etc. This antenna is fitted with the standard co-ax fitting and may be mounted on cowl, fender or rear deck of an auto. Works as a quarter-wave against ground on 50 mc. and as a three-quarter wave for 144 mc. Anyone interested in using one of these inconspicuous jobs for 10 meters may be interested in knowing that the WCA-143 may be stub loaded and used on 10. It is claimed that this works practically as well as a full sized 96" whip. I, have been using one of these for four years now and have had very good results on 2 meter

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Ward WCA-143 communications antenna, cowl mounted. Actually is a two-way whip.



V2, V14 - 12AU7

R45 - 470 K ohm

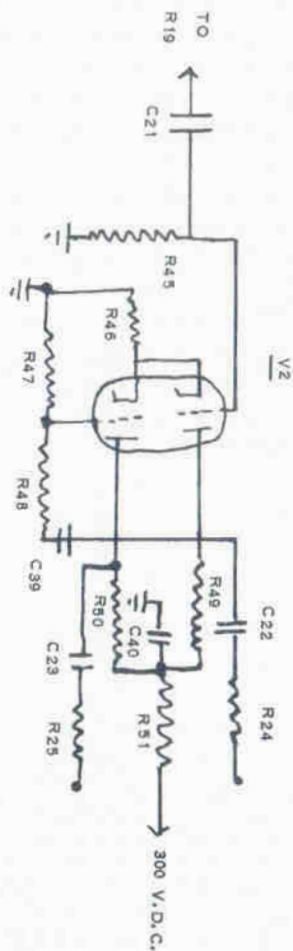
R46 - 1200 ohm, 1W

R47, R54 - 100 K ohm

R48, - 1 meg ohm

mobile. Available from Ladd in Omaha, in case anyone is interested enough to investigate further.

73, John D. Snyder
WØWRT, Omaha



R49, R50, R53 - 47 K ohm, 2W

R51 - 1000 ohm

R52 - 470 ohm, 1W

R55 - 1500 ohm, 1W

R56 - 10 K ohm, 2W

C39, C40, C41 -

.01 YF 600 Volt Ceramic

DX NEWS

Bob, KØJBS had a field day working 12 countries between March 23rd and 25th as follows: F7, HZ1, EL2, ON4, CN8, PJ3, DJ3, LA5, EA4, 11, YU3, and KS4BB. All on 10 meters between 7:30 and 11 A.M.

Anyone who missed KS4BB missed a new country. They are under Swan Island prefix but ARRL said they would count this DXpedition as a separate country. As far as we know Bill CPM, Ferris YZK, John KWB, and Jerry NKG all were lucky.

W8VDJ expedition to VP2DX Dominica was very successful all but his returning state side wise. He told VP3DJ that he would go home and play some golf but on arrival found that his balls would have to be made of snow. Also the bad weather caused the lose of one element on his 20 meter beam and the loss of his temporary quad. Bob is supposed to take off with a WRL DSB rig - might be going back to the same spot.

John KWB got 5 more cards toward the certificate in last months mail.

KØKQÇ has been heard working some South Americans (what's the dope).

Hope to have information on the VP9 contest dates April 25-26, May 9-10 0001 GMT to 2359 GMT at Club Meeting. Winner will be flown to Bermuda with one weeks stay at a nice hotel.

Don't forget to get your stamped self-addressed envelope to WØDMA, 103 South Marshall, Caledonia, Minn. for those long missed QSL cards.

Bill, CPM & Jerry NKG both have nice cards from Danny on the Yasme II expedition. As was heard over the air by this editor, Danny will continue to Grinada, and then possibly go to St. Kitts to get a new boat. Time will tell. Also VP2DJ is trying to get a worked all VP2 certificate going but details are not complete.

Be sure when you QSL Danny via KV4AA that your cards are in GMT time and date.

Be sure with warm weather coming up to get up a little early and take a look on 20 meters for that rare stuff if the cob webs aren't to thick in the A.M.

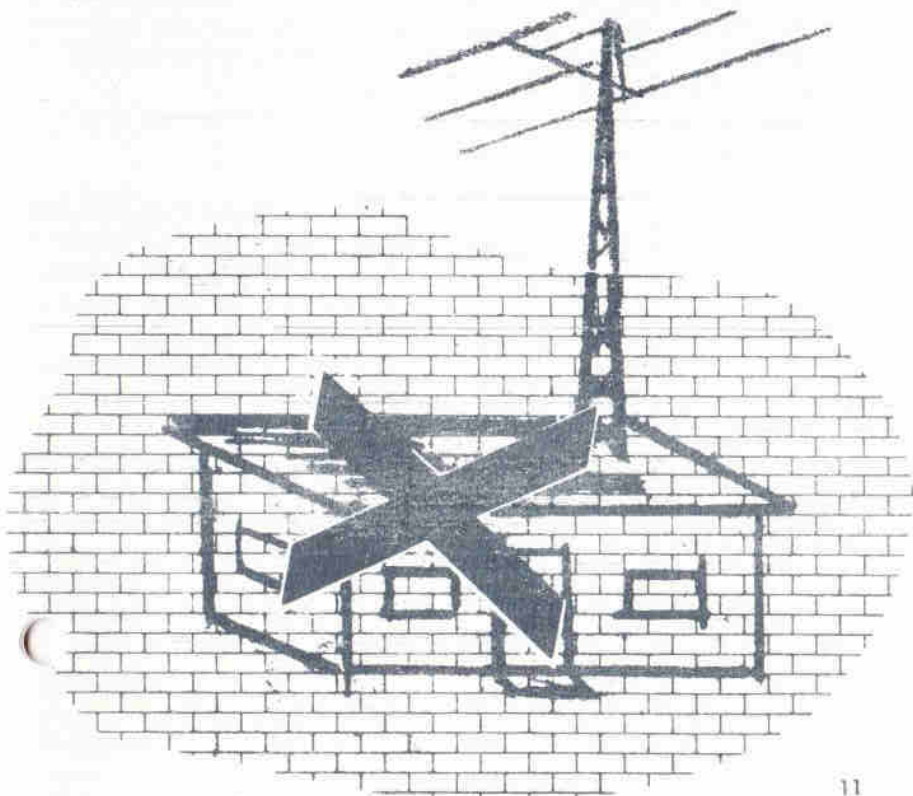
73 and best DX - Jerry

THE CLUBHOUSE IS DEAD

The lethargy of the membership plus the fifty-fifty tie vote killed the possibility of a clubhouse before it came to the committee.

A count of 10 for and 10 against means nothing compared with the total of 20 ballots cast. This sum indicates that the interest for a club house is quite low at this time. However, we must admit that it is increasing as the last time this type of questionnaire went out we only received 12 ballots back.

Much credit is due those valiant souls who voted "yes" and offered their ideas, time and money to complete such a project. In this small group (clique, if you may), we find the hard corps of active amateurs who find time to progress. It is they who will keep our club together and amateur radio alive. To those we say, "Don't give up - we may have a club house yet some day."



DUES

The reduction in dues from 50¢ per month to \$5.00 if paid annually, will be discontinued on July 1st at which time the dues will be a straight \$6.00 payable annually. Likewise the student dues will be \$3.00 annually and the XYL membership will be \$2.00 annually.

This is your chance to save \$1.00. If your dues are not paid, get them paid before July 1st as the treasurer will accept dues on the basis of \$5.00 per year if paid on or before July 1st. He will accept no more than one year's dues in advance however.

Any new members coming in prior to July 1st will come in at the old rate of \$5.00 for the year plus \$1.00 initiation. After July 1st it will be \$6.00 for the year plus \$1.00 initiation so lets get those new members in here before July 1 so they can save a buck.

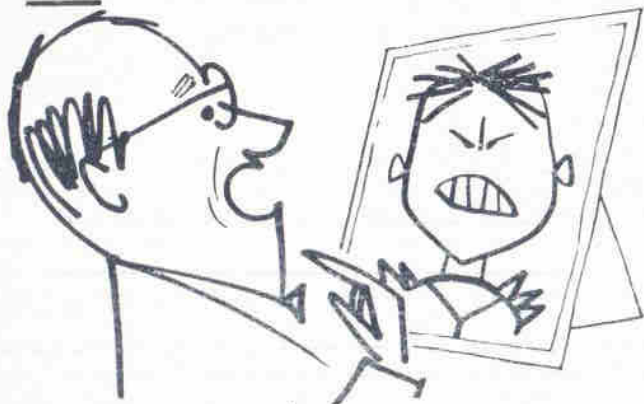
On the subject of money, there are two ways of putting a club such as ours on a pay as you go basis. One is to increase dues; the other to get more members. The Board of Trustees feels that we should not increase dues sufficiently to go fully on a pay as you go basis as the percentage of Omaha Hams who are members is still not as high as it could be. Thus the balance

of any deficit can be made up by additions to our membership list. As you perhaps know the Club has operated with a deficit for the last several years. This deficit has been made up, at least in part, by contributions of some of the members. However, the Board feels that this should not be necessary and that the Club should be able to carry their own load. At the same time the Board is considering money raising schemes and expense reducing schemes in the hope they can get the Club to a sound financial basis.

**OFFICIAL BULLETIN NR 692
FROM ARRL HEADQUARTERS
WEST HARTFORD, CONN.
FEBRUARY 26, 1959 TO ALL
RADIO AMATEURS BT**

The Federal Communications Commission has acted on the League's request for expansion of the 20 meter phone band and proposes to add 50 kc for phone at the top end of the band so that the voice segment would be 14,200 to 14,350 kc. Comment may be filed with FCC up to March first. Details will be in April QST AR.

ME—a "KID STUFF" driver?



Many grown-up drivers are show-offs. Some are childishly impatient, or don't care about others. Their "Kid Stuff" causes most accidents. They should quit it—or quit driving.



"Careless driving is deadly **KID STUFF**"

PHONE EMERGENCY

An emergency arose this month due to the breaking of a water main and the resulting flood due to the fact that it was a pretty good size main. Unfortunately the water had knocked out many of the underground phone lines in that area and as a result the north side of town had no communications with the south side of town and were, therefore, unable to call police, fire, ambulance, doctor, or what we you. Within minutes after the notification, mobiles began to arrive on the scene and park themselves on the various

corners for the purpose of relaying any emergency traffic. The television and radio stations immediately publicized that these mobiles were available so that the emergencies could be taken care of should they develop. Fortunately very few emergencies did develop. However, we were there - ready, and able to handle whatever might be.

Not knowing the seriousness of the situation the 6 meter mobiles were alerted first and as standby the 10 meter mobiles were ready to go at any moment

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and we were ready to call in the 2 meter mobiles should they likewise be needed. After about three hours of operation the phone company was able to maintain at least emergency communication and we were then relieved. You will find a letter elsewhere in this issue regarding this emergency thanking us for our part in it.

FOR SALE:

KWSI Complete - \$1000.00
Contact Joe Beler, BE-3012.

In behalf of the amateurs in Omaha and vicinity, both those who were placed in service and those who were standby alert, we would like to say "It was a pleasure to have been of service."

LAST MINUTE NEWS

One of the locals of a few years ago Everett Jones, WØSHH, had a heart attack March 30th. He is in Loveland Memorial Hospital at Loveland, Colorado in fair condition.
Al - WØJJK



"When the hi-fi bug bit him, it bit hard!"

METROPOLITAN UTILITIES DISTRICT

Omaha 2, Nebraska

March 17, 1959

Mr. W. D. Noyes
Chief of Operations
Omaha and Douglas County Civil Defense
5th Floor, City Hall
Omaha 2, Nebraska

Dear Mr. Noyes:

I would like to take this opportunity to express our appreciation for the assistance extended by you and your Civil Defense organization when the break occurred in our water main near 22nd and Lake Streets on Sunday afternoon, March 8.

The prompt and efficient manner in which you provided emergency communications service in the area affected is certainly to be commended and admired. All of us at the Metropolitan Utilities District are, of course, extremely sorry this situation occurred, and we are fully cognizant of the fact that it would have been much worse had it not been for your aid.

Please accept for yourself, and convey to all other members of your organization, the grateful thanks of the Board of Directors, Management, and all employees of the District.

Signature - R. H. Trester; General Manager

City of OMAHA, NEBRASKA

Mr. George Winkler
Director of Warning
and Communications
Omaha-Douglas County Civil
Defense & Disaster Control
403 City Hall
Omaha, Nebraska

March 30, 1959

Dear George:

The communications reports which you have forwarded to our office for the past two years certainly demonstrates the vitally important position that Omaha's and other radio operators occupy in your disaster communications program.

Knowing how you value the services of the amateur radio operators, we share the feeling of respect and admiration you hold for these men who so capably supplement existing public safety systems.

The time spent by local amateurs in developing an efficient disaster communications system is a fine example of service to the community and it is our hope that Omaha can continue to depend upon their very valuable services.

Signatures - Lynn R. Carey, Public Safety Director; Wm. Dean Noyes, Chief of Operations Omaha-Douglas County Civil Defense & Disaster Control

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

NEXT MEETING

AK-SAR-BEN 4-H BUILDING

AK-SAR-BEN FIELD

APRIL 10, 1959

8:00 P. M. SHARP