



HAM HUM

Published by
AK-SAR-BEN RADIO CLUB, INC. - Omaha, Nebr. 68101
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Vol. XXI
No. 6

June 1971

NEXT MEETING

WHEN: FRIDAY, JUNE 11, 1971

TIME: 8:00 P.M.

WHERE: RED CROSS CHAPTER HOUSE
432 South 39th Street, Omaha

WHAT: Discussion of plans and preparations for Field Day.
(See map of location of site, pages 8 and 9).

Eyeball QSOs and refreshments.

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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HELP! HELP! HELP!

Guess I have heard this cry from many of our past presidents, so now it is my turn on the soapbox. We would like to see more help from the general membership on club projects, including the important one coming up - Field Day.

At the last meeting I mentioned that the club tower trailer needed another coat of paint and asked anyone who could help with a painting party to contact me. Have had no volunteers, so I am putting the bite on again. If you will be able to help paint the tower trailer between now and Field Day, please see me or one of the Board members at the next meeting. We will try to set up a Saturday to get the job done.

I did have a volunteer on a small painting project at the Red Cross tower and appreciate the offer of help. As soon as weather permits, that job should be done.

Let's all get together at the next meeting and get organized and make Field Day a smashing success.

El Presidente

NOTE OF THANKS

Dear Sirs: I am writing you to express my pride in belonging to such an active and useful organization as the AK-SAR-BEN RADIO CLUB.

I also would like to compliment you on the very complete and useful information which the great publication HAM HUM affords to all interested amateurs. All my friends at school, in and out of ham radio, borrow the magazine as often as is afforded.

TNX again for your deep service to Ham radio.

Randy Curtis, WNØDDZ
3203 South 39th Street
Omaha, Nebraska 68105

SILENT KEY

Fern F. Koskovich, WØFBY
324 West 20th Street
South Sioux City, Nebraska
May 4, 1971

MAY MEETING

I was very pleased to see a great turnout at the meeting at Hy-Gain. Guess a lot of the fellows wanted to just how they made some of their pennas and beams down at the boondocks in Lincoln.

We began the tour while it was still daylight and saw some antennas and towers that would make the average ham really smack his lips. We viewed some miniature antennas that were constructed in the small size for testing, since it is much easier to make changes, etc. on these little ones rather than building a flop antenna which may cover half an acre and have several hundred pounds of aluminum in it. We also viewed the storage tank for the fire sprinkler system which, due to the foresight of a fellow named Andy, is also the employees' swimming pool, provided one can stand the cold spring water in it.

We then moved along to the plant and saw where they made everything from parts for large beams to miniature antennas for hand held units as well as the line of electronic equipment the firm produces.

We then adjourned for coffee and donuts, and viewed a table of goodies the firm handles and had an enjoyable eyeball QSO with members of the Club and members of the Hy-Gain staff. Our thanks to all of them for making our visit possible!

Jim Droege, WØYCP

I now know what a lonely editor feels like with no copy and a deadline, and I am not very good at it. Use the cards and send in some news, fellows!

REMEMBER ME???

I'm the fellow who goes into the restaurant, sits down and patiently waits while the waitresses do everything but take my order.

I'm the fellow who goes into the department store and stands quietly while the sales clerks finish their little chit-chat.

I'm the man who drives into a gasoline service station and never blows his horn, but patiently waits while the attendant finishes reading his comic book.

Yes, you might say I'm a good guy, but do you know who else I am? I am the fellow who never comes back, and it amuses me to see you spending thousands of dollars every year to get me back into your store, when I was there in the first place; and all you had to do to keep me was to give me a little service. SHOW ME A LITTLE COURTESY.

de S.E.S.C.A. Newsletter

FOR SALE

Retired from TV business. Would like to sell:

1. SAMS Photo Facts #1 to 1145
Car Radio Manuals #19 to 59
\$750.00
2. Hickok 3" Scope, Model 385,
with extra tube \$ 65.00
3. Audio generator 20-200,000 Ohm,
Model TS382 O/V \$ 60.00

Please call or write:

Tony Klein, WØQOU
Box 218
Snyder, Nebraska 68664
Phone: (402) 1-568-2645

50 MORE HOURS OF HARD WORK?

Besides all of the changes in the last month, our beloved repeater decided to start some of its own little problems which added to the confusion of trying to keep things going. I am sure we had everyone confused for a while as to what repeater, what receiver, and what transmitter they were using while we were reworking the whole mess. We were using the Council Bluffs repeater, switched to 34-94 to fill in the void when the Omaha unit was down. It was hard trying to keep one jump ahead as to what repeater you were using from one hour to the next. But, I think it was worth it, including the problem of WØEQU deciding to identify about every 30 seconds. I am sure many of us were tired of that call, especially me.

To bring you up to date on what we accomplished, the repeater has standby capabilities which not too many repeaters have, including the following:

1. 2 receivers (in case one fails)
2. 2 complete transmitters (in case one fails)
3. Complete single site capabilities in case of phone line failure.

At the Red Cross site there is now a 50-watt battery operated transmitter, and battery operated receivers on 146.340, 146.400, and 449 Mhz for control which are on all the time. A charger keeps the batteries charged so if there is a power failure, the repeater will not miss one word; it will operate for approximately 8 hours without any outside power, and will automatically recharge the batteries as

soon as the regular power is restored. There will be a system that turns the standby transmitter on automatically if there is a power failure. There is also a capability of turning the standby transmitter on from one of the control stations to check to see if it is working. This will probably be done at least once a week so we know that it will work if there is a real emergency. But now that I have said there is practically no way we can be without 34 to 94 communications, the thing will probably blow up in my face at which time we will fool it and turn the Council Bluffs repeater on 34 to 94 and fill up any possible gaps.

I wrote this article shortly after the job was completed, and will try to get some pictures and block diagrams in next month's issue of Ham Hum.

I thank Stan, WBØBTL, Rick, WAØZQX and Neil, WBØEMU, and whomever else I missed, for their assistance in this last project on the repeater.

Keeper of Frankenstein, WØYCP

FOR SALE

Collins DC power supply and mobile mount for KWM2.

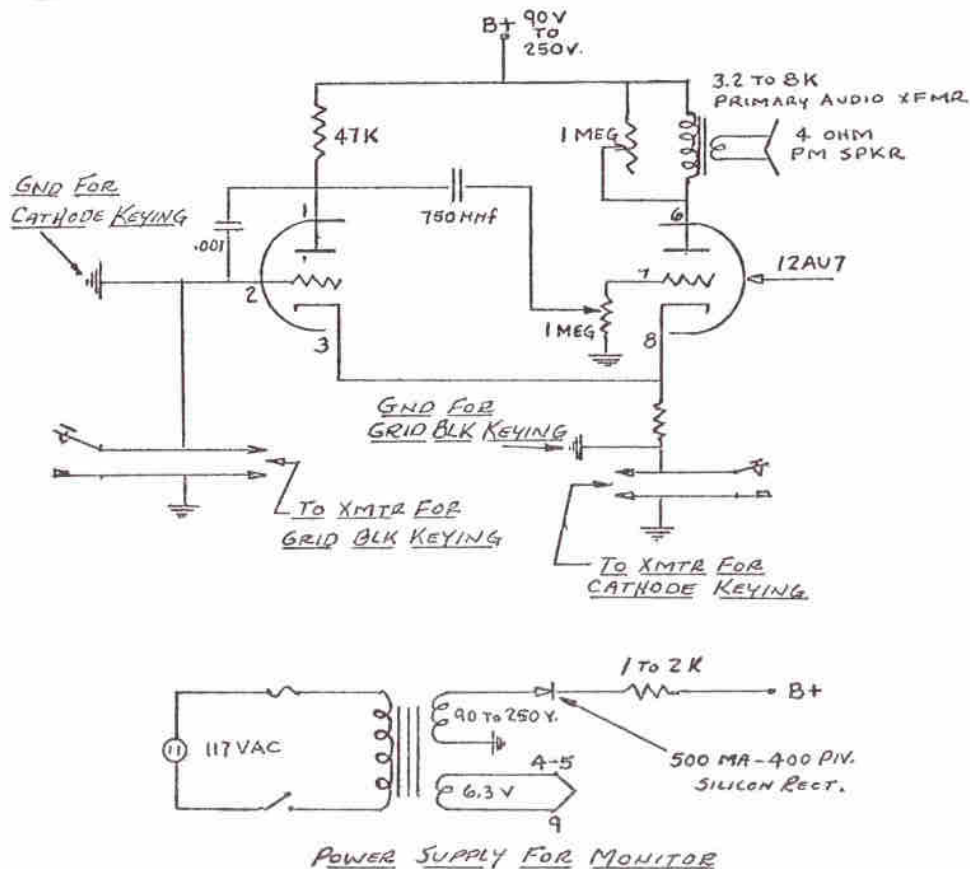
- 2 - Masts for Waters Mobile antenna
- 1 - 75 meter resonator
- 1 - 40 meter resonator
- 1 resonator tip

All equipment brand new.

Ron Sundsboe, WAØMQM
6767 Wirt Street
Omaha, Nebraska 68104
Phone: 556-4914

C. W. MONITOR

The need for CW is still very much evident as brought out by the last contest activity. Here is another monitor, but its simplicity requires its consideration and it's a one evening project thing.



The schematic is self-explanatory. Volume and tone can be made variable or fixed after value settings are determined. The power supply can be built or taken from the rig. Whether you build it in a mini-box or in the rig itself is up to you. I expect to mount one inside the Zeus on a small chassis. Sorry it's not transistorized – maybe someone will submit a solid state version – but, in any event, build it. Thanks to Len, WA8FZW for the circuit.

W3KKN

de Pack Rats, Phila., Pa.

NEWS ITEM

The Bellevue Amateur Radio Club, Inc. will be operating a special station June 26 through July 7, 1971 in conjunction with the celebration of the 115th anniversary of the founding of the city, the 25th anniversary of the Strategic Air Command (SAC), and the 10th anniversary of "Looking Glass," the SAC flying command post.

The call sign will be Whiskey Sierra Zero Alfa Tango Alfa (WSOATA) in line with the theme of "Arrows to Aerospace." Operating times will be primarily in the evening hours, with some daylight operation.

Frequencies will be approximately 30 KHZ inside the lower end of the bands for CW and 3905, 7265, 14290, and 21355 KHZ.

Foreign stations QSL via Bureau to KØBLT. Domestic stations enclose SASE Number 10 envelope to: Chamber of Commerce, Bellevue, Ne 68005.

FOR SALE

G-300-DC Power Supply for Galaxy 300, 3 or 5 (complete with cables and manual)

Galaxy V Mobile Mount (regular mount)

Galaxy V Mobile Mount (plug-in type, custom built)

AC Power Supply-Home Brew

Galaxy Rejector with manual

Contact C. R. "Chuck" Carey
WAØDXY
809 Wood Street
Norfolk, Nebraska 68701
Phone: (402) 371-1523

RAMBLINGS BY A GHOST WRITER

EMERGENCY MINDED is something that I would like to see more of in our club. Now that we have a number of new members, I am sure there are some who would take an active part if more emphasis were placed on this very important facet, as there are many ways we can help besides just hurricanes or tornados. Accidents, lost persons, local trouble, highway accidents, are just a few examples where ham services can be used. We all assume the idea that it can't happen here, BUT IT CAN HAPPEN HERE!

COMMUNITY SERVICE is another facet of the club that is in progress, and the evidence of this is the excellent work being done by the members who are conducting the code class. This is community service being done as it should be, instructing members of the community. I am quite sure that some of our members can come up with new ideas that can be added to this Service.

Say, how would you fellows like to have some means of identification as belonging to GCARC? I was thinking perhaps we could have something like lapel pins made and have each member purchase one. What a nice feeling to sport this means of identification while traveling or visiting.

Are you DX minded???? be on the lookout for some of these contacts and watch your fellow club members weep - AP2HB, OY7ML, 9HIA, 8QALK, UH8BO, UR2KAA, THESE ARE BUT A FEW, BUT THERE ARE MANY MORE GOOD JUICY CONTACTS AWAITING THE ONE WHO HAS THE PATIENCE AND

WANTS TO WORK GOOD DX . . .

Does anyone have new ideas on antennas? Certainly some of you fellows who like to play around getting better results from your rigs

must have some new "Rube Goldberg" type of antenna that is producing results. Let's have some of the ideas up at the clubroom; after all, isn't this one of the uses for our clubroom?

Want to have some fun . . . get hold of a good fluorescent light tube and tie it close to your antenna wire near the far end, but do not connect it electrically. Make sure the bulb is flush with the wire horizontally and every time you press your key down or modulate your rig the bulb will light and keep your neighbors wondering what those people on Mars are saying. Of course, the only time that you will be able to see this bulb light will be when it is dark and don't expect to make it light with only 2 watts of power.

Slo-scan television is rapidly taking its place within the Amateur ranks today. Kits may be purchased at a reasonable price, and a number of hams are availing themselves of these kits and are doing a bang-up job with them. At the present time, most of this activity is centered around the mid-west and west coast. I was talking to a couple of hams around Wash. using Slo-Scan TV, and their reports were very encouraging, stating that their pictures were clear and distinct and were being received over a distance of a couple hundred miles. Of course, the more hams there are that take an active part in this media, the faster that progress will be made. This offers a very good opportunity for some of the young hams coming along to gain valuable experience leading to

a good paying job later on. Don't be afraid to tackle these kits, as I am quite sure that you would get plenty of help from the various members of the Club.

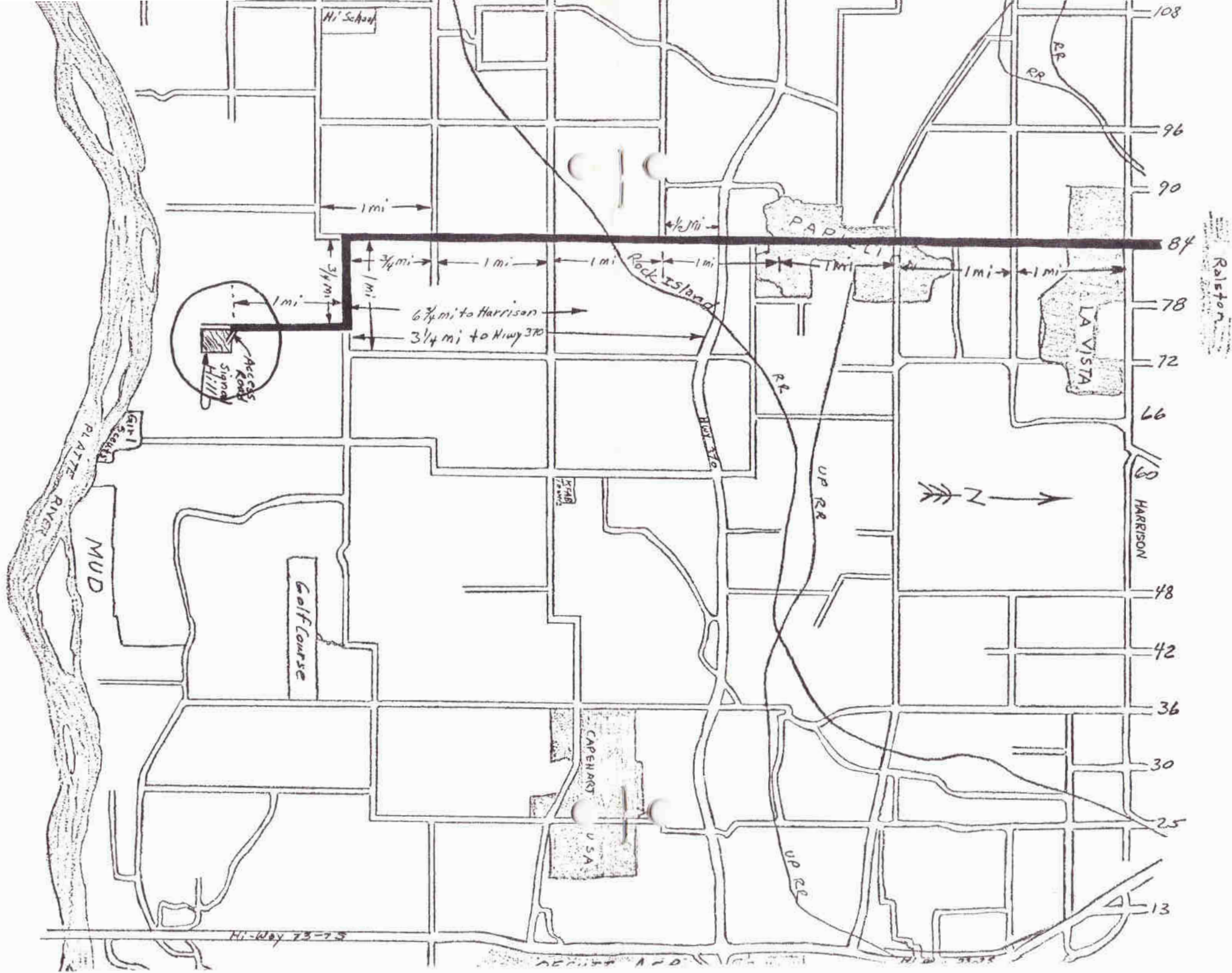
7s'es CUL . . . Ghost Writer
de GCARC, New Jersey

SAYS WHO???????

As there is more and more on the 2 meter FM group, I hear all kinds of rumors, such as, there is a set fee on the repeater, and various other things like long-winded conversations are forbidden, which is somewhat true for all the listeners on 94. But just try listening on 146.76 or 146.70 where I can attest to the fact that in QSOs that have gone on for hours, some of the world problems, your love life problems, and what ails your dog have been solved many times. Sounds like good old 6 meters. Checkers may be next on 76.

As many of you already know, the prime activity on 146.70 is RTTY and the group on there is always looking for new activity in RTTY. So, if you have any RTTY gear gathering dust, get a 70 rock and join the gang. I hear by the grapevine that there is activity in Lincoln and St. Joe on 70 RTTY, but I haven't heard of a confirmed contact with any of these stations yet. Hi. Hi. I think my model 15 would fall over if it heard the call of a station out of the metropolitan area, or it would be me falling off my chair. So, dust off the model 15 and tune up the TU. See you on 70 RTTY or be chewing the rag with you on 76.

73,
Jim Droege, WØYCP



VHF-FM IS GETTING BIGGER. Even W5KR has a couple of 9-Watt transceivers. One will go in the VW bus on 146.94 simplex, which is a more or less national frequency. As soon as I learn how, I will insert 146.34 transmit capability so that I can perhaps get into some of the repeaters up country. At least three repeater channels will be desired by those who travel about the country. Here is a list provided by Texas RACES Bulletin. It should give you some ideas on just which crystals you will want to order.

LOCATION	INPUT MHz	OUTPUT MHz	LICENSEE
Austin	146.34	146.94	Unknown
Baytown/Sugarland	146.16	146.76	Unknown
Big Spring	146.34	146.94	W5TOQ
Dallas	146.28	146.88	WA5KVW

(Also connects to Dallas Police Dept. with 5 beeps on one single carrier and one beep to disconnect)

Dewalt	146.28	146.88	Unknown
Fort Worth	146.34	146.94	WA5TYM
Fort Worth	146.16	146.76	WA5TYM
Houston	146.28	146.88	Unknown
Houston	444.10	449.10	Unknown
Irving	146.13	146.73	Unknown
Killeen	146.34	146.94	WA5YTY
Lubbock (# Autopatch)	146.34	146.94	WB5BRY
Lubbock	146.28	146.88	WA5EDE
Midland	146.34	146.94	W5QGG
Mount Pleasant	146.34	146.94	Unknown
Pasadena	146.34	146.94	Unknown
Richardson	146.22	146.82	Unknown
Richmond	146.16	146.76	WA5YUB
San Antonio	146.34	146.94	WA5VKZ

(should have Autopatch capability soon)

Waco	146.28	146.88	W5KJA
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de "Off Resonance" - Texas

FOR SALE

Model 15 and 26 Teletype,
Collins 32V3 Transmitter with FSK.

Paul D. Combs, KØABT
Box 1161
Norfolk, Nebraska 68701

DAFFYNITIONS

LIPSTICK—A device that makes every kiss tell.

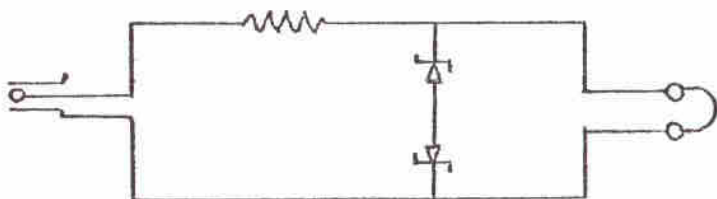
KANGAROO—A pogo stick with a pouch.

—Service

BE KIND TO YOUR EARS

Did you ever, during a contest, dig for a very weak station, straining to hear an elusive section, using a hi-gain converter, and the audio cranked way up? Suddenly, your friendly competitor opens up on the frequency with his cruncher. POW – right in the ears! You rise up two feet from the chair, eyes crossed, audio meets dead center in your brain, your nerves are completely tangled. Even the earphones are trembling. This isn't too bad, as long as the black coffee and the papaya juice are handy. But by Sunday afternoon, the papaya juice is gone and so are your eardrums.

Have faith, consider the following circuit. It will help.



By building the above three parts into your headphone plug, all the above problems are eased. The zener diodes connected back to back limit the peak voltages delivered to the earphones. Try various zeners and resistors to suit your phones and what level you like. Resistors between 2K and 6K should be OK. Zeners should be the same value. They are made 3.9 volts, 4.7 volts etc. on up. Naturally, if you use higher voltage ratings, higher voltages will occur before limiting takes place. One watt zeners are OK. You can mount these in a large size phone plug or in your receiver ahead of the output jack. In any case, this gadget will make operating considerably more comfortable.

W3KKN

de Pack Rats, Phila., Pa.

GOOD ANTENNA OR HIGH POWER, WHICH IS MOST IMPORTANT?

How often have we suffered through the sermon preached by "Old-Pro" Ham on the virtues of a good antenna system at the expense of high power? The refrain sounds like, "Look, you don't need high power if you just put up a good antenna! Put it up high, have lots of gain, low SWR, and you can work-the-world with no

trouble!" (great, great, great, etc. etc.). Ultimately, our suspicions become aroused when we learn "Old-Pro" has willy-nilly retired to his shack, fired up *his linear*, and proceeded to meet his sked on 20 M! We are further amazed to learn that nearly *all* of the optimum antenna protagonists, in fact have their 1 Kw blockbuster (just in case, they

tell us!) Gadzooks! isn't this a bit hypocritical? Or are these Pro's themselves inherent victims of an old obsolete "bromide"? Why, not at all! For, if I could convince every ham in the USA to put up a GOOD antenna and forget the power increase – think of the terrific deal I'd have with my GOOD antenna AND Kw linear!! Guess who will break through those DX pile-ups, or who will get that phone patch through to LA? (we shall leave that answer as an exercise for the gentle reader). After all, the bands are congested enough today and a few less linears can only help ease the clutter.

I suspect there was a time (years ago) when the bands were wider, the hams were fewer, and, perhaps, less wealthy. Consider the case of W2ZZZZZzzzzz, the laziest ham in the county, who poured 1 Kw into his copper rain gutter and got 5X5 reports on G2 land. Up the block is W2SHARP, who designed a new-fangled stacked beam system (Yagi, he dubs it) and gets a G2 land 5X9 report with a mere 40 watts input! Naturally, SHARP's exuberance runneth over, and he hastens straightaway to inform ZZZZZzzzzz of his discovery. SHARP proclaims – "it ain't the power, Buck – it's the antenna, etc., etc. – (ad nauseam); hence, a new epithet is born. In a few months (after John L. Lewis muscles through a new contract) W2ZZZZZzzzzz stealthily invests in a new GOOD stacked Yagi and Presto! his signal is far bigger than SHARP'S! Now SHARP can't take this lying down and willy-nilly, the power race is on! (The FCC has benevolently slammed the door at 1 Kw; otherwise,

we would all disintegrate into a swarm of electrons).

Of course, we aren't disputing the irrefutable fact that a good antenna system is most important and indeed necessary for optimum signal enhancement. But, let's face it, today there are just too many hams with towers, beams, and quads. So how do we compete? The linear amplifier, naturally. The old adage is still true, you don't need the power to get there, a good antenna is sufficient. But what about your neighbor who has a good antenna system and a kilowatt amplifier? After all, you both work all week long and get on-the-air at nights and on weekends like everybody else. The obvious corollary follows: YOU need the power to *drown out your neighbor* – not to get you there! Otherwise, the old patience factor goes up dramatically and we soon wish we had Thursday mornings off from work in order to work that rare DX. Those of us running 180 watts soon discover the DX op has the obnoxious habit of always responding to the biggest signal. Also, that W1 station in Vermont (last State for WAS) with his 1 Kw cranked up, refuses to turn his RF knob up a few degrees in order to give our 180 watt station a much desired contact.

Thus, to achieve optimum signal QSO enjoyment, sadistic satisfaction, and eliminate your high patience threshold, go get that linear AND tie it into your GOOD antenna system (you may miss a month's rent a quadruple your TVI – but that's another story).

de WA2NPD

de GCARC, New Jersey

Reflected and Directed

STUPIDITY IN DISASTER COMMUNICATIONS

Once again, the United States has suffered a major natural disaster: the earthquake in Los Angeles and its environs. Once again, most operating radio amateurs have made themselves appear to be a lot of stupid clods. Yes, stupid clods!!

Just as in previous disasters – the hurricanes that have beset Florida and the Gulf Coast with painful repetition – the great bulk of operating radio amateurs have carried on “as usual,” to the immense detriment of disaster-related communications. It is no credit to any amateur that he carried on normal QSO's on ANY of the frequency bands which can generate interference with either the reception of Los Angeles stations, or reception by any station attempting communications with Los Angeles. SINCE NEARLY EVERYBODY in the United States has relatives or friends in the Los Angeles area, message traffic – so-called “welfare messages” – could be expected to originate from Maine to Florida, and from any place between there and California. But what happened? Let us relate a personal experience.

Receiving a telephone call from a nerve-wracked individual whose 87 year old mother was a patient in a convalescent hospital in North Hollywood, California, and whose sister in North Hollywood could not be reached by telephone or otherwise, I tried to make a welfare inquiry via 20 meter phone. Despite the fact that news of the earthquake had been

trumpeted over radio and TV for hours and hours, do you think that American amateurs made a conscious effort to GET OFF THE AIR? Heck, no! All that the typical amateur radio operator seemed to do was YAK, YAK, YAK! The typical QSO was evident – signal reports, details of the commercial rig and antenna, calls for DX – absolutely no consciousness of an emergency at all! Not a hole in the QRM!

Moving to 40 meters – where there seemed to be some holes not occupied by Radio Moscow and the BBC – I found WESCARS and MIDCARS moving traffic. And the miracle of miracles, a station within telephone range of North Hollywood on 7284! Calling him and raising him, I was utterly aghast when a huge signal from K1--- slobbered onto a frequency just 1 kHz above, with sidebands a mile wide as he talked and talked and talked to a W8 in Grand Rapids and another W1---. It was impossible to hear the W6 through the K1, even though the W6 was a good S7 to S8; so obviously, the thing to do was break the W1, and ask him to move or to hold until I got the message through. Do you think this clod acknowledged the break? Of course not! He is a genuine, red-blooded American clod; and he insists on his right to act like one.

Finally the other 1st district station acknowledged what he mentioned as my “strong signal.” (2kW PEP into an inverted Vee favoring east and west; usually S9 plus in all of New England). I begged him to ask the W1 to move off so I could clear some emergency traffic, so the California station would not be interfered with. At this point,

the K1 came on frequency, stating, "I don't know of any emergency. I don't hear any California stations. If W8AB (note the B instead of P) says they are 1 kHz away, I guess they haven't got selective enough receivers." (Note his unfamiliarity with the phonetics Alpha Papa! And his lack of the slightest understanding of receiver bandwidth!)

Fortunately there was a bit of humanity in W1 - who followed the K1's dull remarks with the comment, "Well, I guess an old timer like you has some right to use the frequency, so we'll leave it clear for you," and he did.

In short order, I passed the North Hollywood phone number to the W6, who in less than a minute had confirmation that both the mother and sister of the man making the inquiry were OK. Thereupon, the W6, proceeded to take Welfare Inquiries from almost every U. S. call district, plus an XE, and an HC for good measure! If anyone doubts what hams can do in an emergency, if the idiots will simply stay off the air, he should have listened in.

Needless to say, I made a good friend for amateur radio out of the local man whose inquiry I forwarded, and for whom I obtained an answer. But how much more good can be done - if only we will discipline ourselves! Not the least of our troubles is that the FCC does absolutely nothing in the way of promptly recognizing an emergency and designating selected frequency areas in which all other communications than that relating to the emergency is barred. This has been true in every recent disaster; and a share of the blame for the present situation surely belongs to the

Commission for not using the power it has - and which power the individual amateur does not have. Nor can we compliment the ARRL or its Communications Manager for lack of a decent system of handling welfare inquiries, failure to press FCC for prompt declaration of emergency frequencies and an obvious failure to indoctrinate new amateurs in the need of discipline, and need to simply observe radio silence when silence is called for by the tragedy and suffering of other Americans. As to all this "state fair traffic" and "birthday greetings by amateur radio" - I say "Bag it!" With a major earthquake of even greater proportions predicted "for this century," with disastrous hurricanes at least an annual event, with floods sure to follow this winter's deep snows: HOW LONG CAN AMATEUR RADIO SURVIVE SUCH STUPIDITY?

W8AP, George Goldstone
de Auto-Call

THE OLD GROUCH

Anonymous Unknown
c/o Editor, Auto-Call

There is one element in the makeup of FM repeater systems that seems to defy all efforts regardless of the technical and innovative ability of those that have installed and subsequently improved FM repeaters. This one element is the average operator. It doesn't make any difference as to the capabilities of the repeater system, it appears that operators will use the repeater for continuous yak yak making it virtually

impossible for another operator, even if he has an important message, to get into the system.

Due to the technical operation of FM, the stronger signal always prevails, and when the signals on the frequency saturate the limiters there isn't a chance in the world of an outsider breaking unless those doing the yak yak condescend to pause at intervals to admit a breaking station. With AM, often a weak heterodyne will signify a breaking station, but not so with FM.

Some repeater systems have been designed to thwart these non-pausers. For example, one repeater lets the yak yak go for three minutes and then shuts down, requiring a complete start up again for another three minutes. This is supposed to warn those using the system to stand by before they reactivate the system so that a breaker might get in. But this doesn't necessarily work! The yak yak boys immediately reactivate the system and go on for another round. And so on, ad infinitum.

Emergency traffic is a problem. The one with the strongest signal gets to send the message. Now it can happen that there are two important messages on the hook, each at different stations. One might be a fire alarm message, and the other a personal injury message. The fellow with the fire alarm message might rightfully feel that he has the most important message in the world at the moment and seize the circuit, because he is unaware of the personal injury message. Those poor injured people might have to wait a while before the report can be made.

There are those that will take issue with this, but they should use extreme caution. Even such a distinguished

personality as W2NSD, writing in 73 about his recent air trip to Las Vegas complained (and rightfully so) that the yak yak boys simply will not pause long enough to let a breaker in. Many who have had this experience have vowed "ever anon" to pause at least a few milliseconds before going back in order to permit a breaker to call in. Surely it would not be asking too much if everyone using FM, repeaters or not, to adopt this common sense practice.

de Auto-Call

A mother entering a supermarket with 4 small boys went to the clerk and pleaded, "Isn't there a cereal that will sap their energy?"

-de Ham Monitor

If all the
excuses
for not wearing
safety belts
were laid out
end to end,
we wouldn't be
surprised.

What's your excuse?

Advertising contributed
for the public good.





WORLD RADIO

has the **NEW LOOK** in "ham-gear"
and **SAVES YOU MONEY!**

the new **KENWOOD**-line
compact design — virtually
all solid state, with amazing
versatility

R-599 Receiver

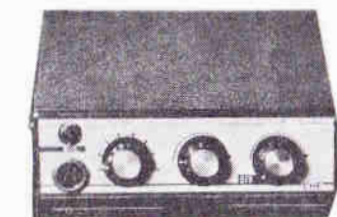
\$298⁰⁰

160/10 meters, plus 10 mHz WWV, plus
converter provisions; all modes, including
FM, fantastic versatility. Solid-state with
1/2 kHz calibration.

T-599 Transmitter

\$345⁰⁰

80/10 meters with nominal 200 watts SSB/
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FMV 2 Meter Transceiver

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Solid-state with an OUTPUT of 10 WATTS (13.8
VDC), squelch, mike. Includes 146.94 mHz
simplex and 8 channel provisions.

We also have the new
TEMPO/ONE 80/10M.
Transceiver at

\$298⁰⁰

GREAT VALUE!



ASTATIC
HAND
MICROPHONE

\$485

- Ceramic element
- Rugged case
- Push-to-talk
- Coil cord
- It would be a big value at \$10.00!

Order
#53-110

NEW! CLEGG 22'er
FM Transceiver \$369⁹⁵

A terrific performer with 60 watts input,
and comes ready to use on 117VAC with
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