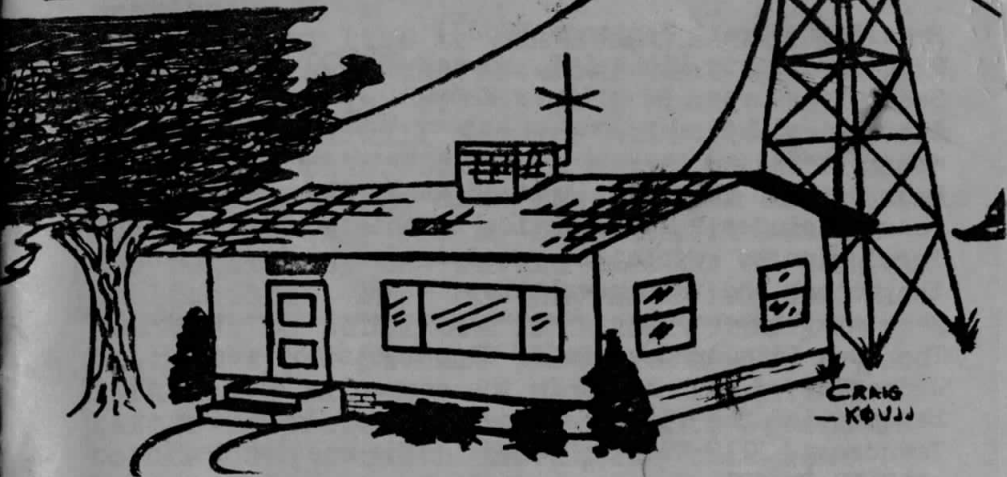


RIVER CITY RADIO RAG



September, 1975

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and

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The deadline for submission of material is the 20th of the month preceding the desired month of publication. Any article dealing with any aspect of amateur radio is welcome. It is not our intent to edit prospective articles, however we reserve the right to delay the publication of an article due to space limitations. Any submission deemed not of general interest to the amateur community or not in the general good interest of amateur radio will not be published.

Iowa City Amateur Radio Club Officers, 1975

President; Craig Fastenow KØUJJ
Vice-president; Michael L. Nowack WBØHOG
Sec'y-Treasurer; Ed Miltner WBØOUP
Activities Chairman; Dennis Kahler WBØMCX

Dues for the Iowa City Amateur Radio Club are \$6.00 per year (includes a subscription to this publication). Permission to reprint is granted if credit is given to the author and this newsletter.

The Iowa City Amateur Radio Club meets the second Wednesday of each month in the community room in the basement of the First National Bank of Iowa City at Towncrest, 1117 William Street. The meeting begins at 7:30 PM CDT.

Editor of the RAG: Michael L. Nowack WBØHOG
403 Amhurst Street
Iowa City, Iowa 52240

Ye Ed Sez:

Well now that everyone is back in the old routine after an active summer, we have many club activities to look forward to in the next few months. Formost is the Ham Radio Display that is planned for a Saturday late in the fall. The participation of many of our members will be needed to make this a complete success. More on this at the meetings and in the RAG as things develope and the date is set. Another of the planned projects is a 'Talk to Santa' program to help patients at the two Pediatrics wards in Iowa City enjoy Christmas just a bit more. Hospital directors at both University and Mercy have responded very favorably at initial inquiries and it is our chance to serve the public and bring some joy to the small children who must remain in the hospital during the Christmas season. More on the help that will be required at the next meeting.

I would like to ask something of the contributors of the meterial that appears in the RAG. It in effect is a change in the operation and will require a little more work of each of them, but will make the work load of the Editorship much less. I am making this change not only for my own benifit but for the benifit of the future editors of this publication. From now on, material for the RAG must be submitted in 'camera ready copy'. That is typed on half sheet form with a good dark inked ribbon or a carbon ribbon. (The latter is preferable) I presently spend 12 to 18 hours a month assembling this newsletter and most of that is spent typing. If you think that this is asking too much, then jus t consider what I am being asked to do by typing it all myself. Would you be willing to do it? If anyone has any questions about this, please see me at the meeting, or call my home.

73, Mike WBØHOG

The answer to last month's puzzle is: the largest square number that can be formed using each of the nine digits once (1-9) is 923,187,456 the square of 30,384. The smallest is 139,854,276 the square of 11,826.

This month's problem involves computing an average. Let us say that John Q Motorist takes a leasurly drive through Iowa City and goes from his home to a local store and his speed is a constant 10 miles per hour. On his return trip, following the exact same route, his speed is a constant 15 miles per hour. Now, what was his average speed? Do not answer too quickly as you will surely be wrong. Answer next month.

* * * * S T R A Y * * * *

A further note on the Cedar Valley Hanfest on October 5th is that the grand prize will be a Collins 30-L1 linear. Quite a nice prize and one anyone would love to have.

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In Case You Missed It

The August meeting of the ICARC was called to order by Craig KØUJJ and members and guests introduced themseves. There were no minutes or tresurers report due to the absence of the Sec-Treasurer Ed WBØØUP. Craig thanked Dan for the great picnic that was held for the members. Mike WBØHOG brought up the Mall display project and a short discussion follwed. Craig bid Mike WNØNCX farewell on behalf of the club and wished him well on his move to California. Craig announced the results of the transmitter hunt held on the day of the picnic. The winner was WBØHOG. A letter of nomination for WØFZO was presented and it was moved and passed that Craig sign it on behalf of the club, nominating WØFZO for Vice-Director, Midwest Division. The meeting was then adjourned and a program by Dave KØLUM on RTTY was presented. After the meeting members went to the Annex for a social hour.

The Ten Electro - Commandments de WØLFF

1. Beware the lightning that lurketh in an undischarged capacitor, lest it cause thee to bounce upon thy buttocks in a most unseemly manner.
2. Cause thou the switch supplieth large quantities of juice to be opened and thusly tagged that thy days may be long in this earthly vale of tears.
3. Prove to thy self that all circuits that radiateth and upon which thou worketh are grounded and thusly tagged lest they lift thee to RF potential and causeth thee to make like a radiator too.
4. Tarry thou not amongst fools who engage in intentional shocks, for they are surely non-believers and are not long for this world.
5. Take care thou useth the proper caution when thou taketh the measure of a high voltage circuit so that thou dost not incinerate both thee and thy test meter.
6. Take care thou tampereth not with interlocks and safety devices, for this incurreth the wrath of the powers that be and bringeth their fury upon thy head.
7. Work thee not on energized equipment for, if thou dost so, thy acquaintances will surely be buying beers for thy widow and consoling her in certain ways not generally acceptable to thee.
8. Verily, verily, I say unto thee: never service equipment alone, for electrical cooking is sometimes a slowful process and thou might sizzle in thine own fat upon a hot circuit for hours on end before thy Maker sees fit to end thy misery and drag thee into His fold.
9. Trifle not with radioactive tubes and substances lest thou commence to glow in the dark like unto a lightning bug, and thy wife be frustrated and have no further use for thee, except for thy wages.
10. Commit to memory all the words of the prophets which are written in the safety manuals and which giveth out the straight dope.

THE GDO AND THE VOM
--GREAT--
BUT DON'T OVERLOOK THE XYL

Every ham is familiar with a few of the more common tools of the trade such as the VOM and the GDO. But I often wonder how many realize what an invaluable, but often overlooked accessory the XYL could be...

Even though she may not have a ticket, used properly she may fill the void in the shack and make your operating more pleasurable.

As a fer instance, let me relate this lovely incident that occured at this QTH. Perhaps it will bring a lump to your throat. A definition of love and true affection could not be more dramatic, and if it brings a tear to your eye--it just proves the point.

It was a typical Wednesday evening with the sweet little thing in the living room, eyes glued to the Wednesday night movie on the mahogany knot hole. Meanwhile, in the shack I tuned for some rare DX that was coming through on 20 meters. Suddenly to my horror the rotor quit on me and naturally in a direction away from the DX. The beam refused to budge.

I rushed upstairs and explained my plight to the XYL, but she refused to leave the movie. Later, during a commercial, she agreed to help. Almost at the same instant a flash of lightning and a clap of thunder rattled the house.

Undaunted, she donned her lineman's belt, and at that precise moment I was so proud of her as she began her ascent up the four inch pipe mast.

After all she weighs only one hundred pounds, and the lineman's belt with cutters, pliers, hammer, small crow bar, twenty five foot roll of RG8/U and a few other things she needed weighed forty two pounds.

I watched her as she shinnied up the pipe, and I could see her quite well during the lightning flashes, and between rolls of thunder I could hear the rattle of tools as they dangled from the belt.

She yelled to me to turn on the flashlight and shine it at the top. She really didn't need the light to find the top, because the only way to the top was up. Anyway, she knew the way to the top as she had climbed it many times before. Apparently she was not aware of the price of flashlight batteries.

It had begun to rain quite hard and I yelled at her to get a move on up there, because I was getting

XYL--continued.....

wet. She had finally reached the top and yelled down for some light. I told her the lightning was so frequent that she could work during the flashes.

She got excited and dropped a hammer that almost hit me on the head. I told her for being so careless, and since I was getting wet, I was going into the house and dry off. As a nice gesture I watched the end of the movie so I could tell her how it ended as I was sure she would want to know.

When she came in the house she refused to talk to me just because I had yelled at her while she was up on the mast. She wouldn't even listen when I tried to tell her that the movie ended with John and Marcia getting a divorce because John was very mean and unreasonable.

What I originally started out to say is simply that the XYL can be a valuable addition to the shack although at times they can be a bit difficult.

Since she is still a bit miffed, please don't print my name or call. Better yet, I wish this would self-destruct after you read it.

--Anonymous

The Cedar Valley Amateur Radio Club will hold its Hamfest Sunday, October 5, 1975 at Hawkeye Downs on 218 South in Cedar Rapids. The event is being held in the Exhibition Building. There are provisions for overnight camping, and there is ample parking on the grounds. Prizes include 2 transceivers and much more. Talk-in frequencies are 146.16-.76, 146.94, and 3.970 MHz. Tickets are \$1.50 in advance and \$2 at the door. For advance tickets, write: CVARC Hamfest, Russ Boone, WØERS, P. O. Box 994, Cedar Rapids, IA 52401.

* * * * STRAYS * * * *

From HR REPORT: The Dutch abolished the CB service in the Netherlands after widespread abuses convinced the officials that cleanup is impractical. All 27 MHz licenses have been revoked, and mobile monitoring vans have been shutting down illegal stations by marching in the front door and confiscating their equipment. The nationwide crackdown, reported in Dutch papers as being against 'illegal radio amateurs' (demonstrating that media confusion as to who's a ham and who's something else is not a unique American problem) has been understood to be quite effective.

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RTTY enthusiasts are warned that parts for Teletype Models 14, 15, 19, and 20 are going to become harder to get in the near future. Teletype Corp. has announced they'll stop accepting orders for all replacement parts for those models December 1, 1975, so better order spares now. Questions or orders go to Teletype Corp., 5555 Touhy Avenue, Skokie, Ill., 60076, Attn: R. A. Morton, Dept 3121 -- phone 312-982-2168. (HR REPORT)

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A very nice going away party was held for Mike, WNØNCX about a week before his departure from Iowa City. It was attended by 25 to 30 ICARC members and family. We certainly will miss Mike here, but plan on hearing him on the bands as WBØNCX/6 when his newly won advanced ticket catches up with him in California. We wish him all the best in his new teaching duties in CA.

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Plan on donating some time this fall to the Mall display project that was discussed at the last club meeting. It will be brought up again and each of the members will be asked to help out. There is much to do prior to that Saturday (date not yet set) and everyone's talents are needed. 3 people will be needed at the booth at all times in 2 hour shifts and then there is the cleanup afterwards. When asked please be ready to say yes.

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"Hello From the Low End"

de WAØDXZ

About a month ago, I got the bug to get on two meters again. I had been on 2 FM for a couple of years, and gave it up, due to many problems inherent in the system. These were, (a partial list) channels, repeaters power, DX, radios and people. Not quite that bad, but I liked to DX a bit on 2, but when the band opened up, the repeaters would still be on and some jerk in Tallahassee would hit the KW and open repeaters from there to Butte. Kind of hard on the little guy with ten watts out and ten elements, trying to fight off 12 other locals for space on the same channel. Fueds, hard feelings, no thanks, so into retirement. Until recently, when I acquired a KLM Echo II. A what? Well, two meters SSB and CW running 10 watts out on SSB and 6 on CW. I was kind of worried that I would have no one to talk to. And it was true.... cause I had no antenna. The 12 element KLM hadn't arrived... so at one AM I got out the VHF handbook, and by 2:30 AM had a 5 element yagi made from (literally) coat-hangers up at about 50 feet. Worked WØEMS in Omaha, slick as all get out, 10 watts to a pile of coat-hangers. Next night, worked a guy in Chicago, told him about the super system. He didn't believe. He asked for a QSL with the rig written on it, as his buddies wouldn't believe him.... Ok, so I got into Chicago easily any evening, Omaha easy, Quad Cities, made Minneapolis, Delta, Iowa, Woodhull, Illinois, all the biggies. Then the beam came and I got into Chicago 10 or 20 over nine. Wow, what a difference a pile of aluminum can make. A bit about the beam.... The KLM is an excellent unit but the instructions are terrible. KØCKX had warned me, but I had no idea... it went something like, "First put the 3 piece boom together. Good, now, put the elements on. Good. Now the matching loop, if you use one. Good. Thanks for shopping KLM." It worked though. Then came the last small package, the KLM 140 watt output amplifier. The thing was beautiful. I think I got it the same night there was a band opening, and wow-- 30 over 9 on the Ohio-Penna border, 599 Arkansas, 599 Detroit,

Indiana, Ohio, Illinois, Kansas, Wisconsin. I heard a W8 calling CQ, called him, He said "WAØDXZ, kinda crowded here, let's go up 5 kc". I never heard him again, but later found out it was a rare West Virginia station. Heard, didn't work a VE3 (I think KØMQS in Delta, Iowa worked him though). For fun I dropped back to 6 watts from 140 when talking to a Chicago station, and was still 20 over 9. Lots of fun. A few new 2 meter states too.

The Echo has a VXO on transmit, so you can move ±6 KHz from your chosen 'channel frequency'. And also has a separate RIT, so you can move the receiver off of your transmit frequency. Came in handy, during meteor showers. I had never worked meteor scatter before. Read up on it, but there wasn't a lot that was too practical. The consensus on the air was, "Get up at 2:00 AM and point your beam East." I did. Nothing. The first night all I heard were lightning crashes.... it hadn't rained in 3 months, but now.... RAIN!! Well, the second night (morning?) I listened for an hour or so, and nothing. NOTHING. Called a fast CQ about 150 times. Nothing. Then... WHAM, 599 for about 2 seconds, Connecticut? I was really excited. Took a few tries to get any info exchanged, because a signal would go from S-9 to noise in a second or two. Anyway, finally worked Connecticut and NJ that morning. Woke up at 4:30 to go back to bed. Asleep at the key.

What's the moral of the story? Well there are a heck of a lot of guys on 2 meters. Many more than I thought. Many in Chicago, Minneapolis, Omaha, Kansas City, Wichita, LaCrosse, and many small Illinois towns, (Peoria, etc.). There is always (usually) someone to talk to. Action usually begins around 9 PM, til maybe midnight? Rigs? A little of everything. A few rigs in the ten watt class (output), a few around 50 watts out, then the jump to 150 watts out, then many, many at a KW input. A lot of FT-101's with converters, or transverters. A lot of homebrew I think.

Locally? Well, I am running 140 watts to 12 elements at 50 feet. There is a rumor that KØCKX can

put out about 300 watts with the flip of a switch. KØSVW bought a dream machine, the Multi-2000 and can run 10 watts out FM/SSB/CW. I'd bet we will see him with more power later this winter or maybe next spring. WØDEN and WØGCQ seem to be inactive currently.

Antennas? One of the biggest in the midwest, W9AAG, Dallas, in Woodhull, Illinois, who has over three dozen states on 2 meters, runs a five over five, to 250 watts. I am not sure if it is in or out. A lot of Hy-Gain 15 elements, many KLM 12 element combos singly or stacked, (48 elements is not uncommon). Some homebrew as per WØDEN?

Well, there is a lot of equipment coming onto the market for 2 meter SSB/CW now. Possibly because of the overcrowding (in some areas) on the FM segment, some seem to be turning to SSB/CW for new kicks.

Next month, marbe another report of what is heard, worked, etc., plus a review of some of the current, past, and soon-to-be-marketed equipment. Some nice stuff coming out folks.

73, from ^{the} low end....WAØDXZ--Bob

* * * * * STRAYS * * * * *

If you are thinking of buying an ICOM IC-230, best prepare for a long wait as KØSVW reports that they are extremely difficult to find much to his dismay. He has been trying to find one to replace the one lifted from his van in the DC area recently. All the dealers are anxious to take his order and bank card number, but none will guarantee quick delivery. A check with WAØTFV in CR confirms that there are almost none in dealers hands. Perhaps a preview of things to come in the amateur market as the 'other service' continues to expand at an amazing rate, inticing manufacturers to put all their efforts in the production of items for that market. BAH!

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Rumors persist, despite known evidence, that the auto-patch system is nearing completion. Some hair-brain even went so far as to say it will be on in 2 weeks! How 'bout it Paul? Any truth?

Contest Corner.... de KØSVW

For obvious reasons, the regular format must be abandoned. So a little about a lot of things.

Di, Chad, and I are in the Washington DC area where I am taking an 8 week post seminar in Radiology at the Walter Reed Army Medical Center. The seminar has gone well and I have managed to stay involved in Amateur Radio.

My Icom IC-230 was taken out of my VW bus the second week I was here. Bet some guy is as sore as I was when he finds it won't work on channel 10. Hi!

The two meter band here sounds like the low end of twenty meters during a contest. There is a repeater in DC or Baltimore on every available pair and the machines are really used, i.e. auto-patches, traffic, RTTY, club meetings and of course, rag chewing. The machine I use has over 600 members! Wow, what we could do with that.

Amsat is here, there is a repeater for SSTV and regular amateur TV. And DXers have the Patomac Valley Association which takes an invitation to join. I'm impressed. I hope to make one of their meetings.

Amateur radio will continue to occupy some of my time in that Di and I will spend this weekend with Fred and Judy Regennitter (WAØHFW and WNØPMA both portable 4) camping in the Shenendoah National Park.

Then the last week we are here the ARRL has conveniently scheduled their National Convention in Reston, VA (10 miles away) no doubt in order that I can attend.....

After leaving here, I hope to pass through Newington, CN and visit the ARRL National Headquarters and WLAW. I hope to take some pictures of these last two activities and perhaps bring them to a meeting.

In closing, I would like to thank all who contributed time or articles to the last issue of the RAG and congratulations to our editor, Mike WBØHOG, for the best issue to date.

SEE YOU IN SEPTEMBER... and 73

Steve, KØSVW

For six years after the club was disbanded in 1946, it lay dormant. But interest in the club found a reawakening after the FCC restructured its licensing system, creating the new novice license in 1951. The new novice license allowed many more people to enter amateur radio without having to meet the older, more stringent requirements. So, during the fall semester of 1952 plans were made to reorganize the club under the sponsorship of the Electrical Engineering Department, with James Fankhauser of the EE staff as trustee. The Johnson county chapter of the American Red Cross loaned it's emergency communications equipment to the club on the condition that they maintain it in good condition and that it be made available to the Red Cross in case of emergency. The equipment consisted of a Collins 32-V, 100 watt transmitter and a Collins 75-A receiver. The EE building was then located on the NE corner of Dubuque and Iowa and the department made room 302 on the top floor available to the club for a station location.

Before any activity could be resumed, the old problem of TVI, which was the original cause for the disbanding of the club, had to be solved. This was accomplished through the use of a low pass filter. The club was then active in assisting it's new members in getting their licenses and handling messages for the students.

The club station remained active for many years at that location but was later moved to a small, dark and dingy room on the first floor of that building. The new location was a cubby hole that measured six by twenty feet, and was, generally, a miserable place from which to operate. The club meetings usually drew around 10 to 15 people to listen to the programs and discuss the business of the day. Most of the club members were interested mainly in just operating and making phone patches home and there was little contest work undertaken. In 1958, Professor Everett Alton of the EE Department became the trustee of the club and the close ties with the Department continued.

The club's fortunes took a turn for the worse when in 1967 the aging Red Cross radio equipment was stolen from the shack. The equipment was never recovered and the Red Cross collected the insurance for it. Shortly after the incident, the EE Department moved the club from their room in the EE building to the club's original home, the aging tin building on the west side of the river near where South Quad and Slater dormitories are now located; the old Communications Lab. The building was beginning to show its years and constant repairs were needed to its roof and walls. During the summer rain leaked through the roof and in the winter the cold wind howled through the walls. It was just as miserable as the previous location. But the stolen equipment had been replaced by a National NCX-5, purchased at a reduced price with funds provided by the EE Department, and in January, 1968 a communications receiver was donated to the EE Department (and then to the club through the influence of Prof. Alton) by the Electronics Assistance Corporation. The club brought its old tri-bander from the old location and strung a dipole from the one remaining 75 foot tower, and several members began the construction of a homebrew linear amplifier. Things began to look up for the club when an old bombed-out mens room in the new engineering building was located. In 1964, someone detonated a cherry bomb near certain fixtures in the room and left the place in a shambles. The Dean of the College was so fed up that he just locked up the room and there it sat until 1969 when Professor Alton was able to pull some strings to get authorization from the Dean for the radio club to use the room.

Later in 1969, Professor Alton took a short leave of absence as trustee of the club and he was replaced during the rest of 1969 and 1970 by Franklin Moore, who supervised the initial stages of the remodeling of the men's room into a radio shack. Mr. Moore made arrangements with the physical plant for locating a 40 foot tower on top of the building and assisted the club members in tearing out the old walls. Professor

Alton returned in time to help with the finishing touches in the shack. All of the work of remodeling and the supplies used in the project were furnished by the club members.

By the middle of February in 1970, the new shack was ready to move into and the equipment was moved back across the river. During the fall semester of 1969 the club members installed a new Hy-Gain TH6DXX 6 element beam on the new tower and later added a 40/80 meter trapped dipole. The old tri-band beam was dismantled and put into storage in the basement of the EE Building. The club was now located in the most pleasant surroundings of any it had had since 1957. They even had an air conditioner that Dean Lyons borrowed (stole) from an old quansit hut the university was tearing down.

The operations of the club had been conducted under the auspices of the EE Department which contributed \$100 a year to defray the expenses of running the club and maintaining the equipment. When Professor Alton retired as trustee of the club in 1971, these funds were no longer available. Craig Fastenow became the new trustee of the club and since that time the club has received its funding primarily from its dues and money received from the student senate. In the past four years the student senate has been quite generous to the club and has allowed us to purchase several new items of equipment and add several items of convenience, such as a telephone to the shack.

At present the station is located in room 4900 of the EE Building. In 1971, Heath donated a damaged SB-101 with AC supply to the club and two model 19 teleprinters were acquired from the VA Hospital. In the fall of 1974 we added a Collins 30-L1 linear and a Drake TR-22C 2 meter FM transceiver to the operation with funds obtained from the senate. We have a novice station on loan from Doug Attig and Gary Godfry, a Heath HW-16.

The club now has about 15 active members. Most of the activity at the station consists of DXing and general talking around, although we have recently begun a beefing up of our message handling service for the students. Last year we passed over 90

written messages for the students and many phone patches have been made. We hope our message service can help alert the general student body to the fact that we exist. Despite the number of years we have been on campus, most people are totally unaware of our existence. Up until last year, the people at the Student Organizations Office didn't even know who we were, and the Facilities Planning Office of the University still thought our shack was a men's room and kept sending plumbers up to check our pipes! But things are looking up for the club with a steady influx of new members with the start of classes this year and many new ideas for new projects.

73 Merritt Jones

* * * * STRAY * * * *

Late Flash from Washington DC. Our own Steve, KØSVW has been asked to give the main program at the DX Forum at the ARRL National Convention. He will be presenting a program on his recent DXpeditions in the South Pacific. It will be much like the one he gave at an ICARC last year. Quite an Honor.

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Also late from Washington. Steve has replaced his stolen IC-230 with a new Brimstone. This was because of the unavailability of the ICOM box. Sounds like a step up to me.

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For those of you with 2 meter transceivers and good antennas, you might consider checking into the Muscatine County CD net that meets each Sunday evening at 8:30 local, (PM) NCS in WAØZJK, Nyle. It is an informal net much like our own. By the way, don't forget to check into it also, at 7:00 PM Sundays.

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KØUJJ has a fairly substantial supply of FCC Forms 610, 610B, and 610C. If anyone is in need of such forms for new application, renewals, modifications, etc, please give him a call to get the forms--phone 351-8258 evenings.

Good news! The Iowa Repeater Council has a new Treasurer, elected at the last meeting in Marshalltown and it is non other than our own fearless leader, Craig Fastenow, KØUJJ, the President of the ICARC. The Council, to which we belong, does all sorts of good things for the various repeater groups in Iowa. Frequency coordination is one of its most important functions. They help resolve interference problems and assign new machines frequencies. The council has the task of representing the best interests of Iowa repeaters in matters involving the FCC, by filing comments with them regarding the various dockets that come before the commission.

Now a little about a new (Feb. 1975) repeater in the Cedar Rapids area, WRØAID, 146.40-147.00 MHz. It is sponsored by the Rag Chewers Radio Club which has about 18 members. WBØFHH is one of the main backers of the repeater. It was set up for the primary purpose of rag chewing, to compliment the 16-76 machine which is funded by the Civil Defense and is used mainly for related functions, such as emergency, CD drills and nets, public service, etc. So to fill in the need for a repeater that can be used for just talking, the 40-00 is just the thing. The equipment is a 'Buck' KØYBM radio, slightly modified, and is all solid state, like the 16-76 machine. The control circuits were built by WBØIUQ and KØLFF. The transmitter and the receiver were done by WØJKI and the power supply and the RF amplifier are by WØPFR and KØEYO. The rack was compliments of KØHWE and the ID'er by WBØJGS. The machine has autopatch, but it is operational only on occasion as the machine has not yet found a permanent home. It has been moved a couple of times and is now at a location east of Marion, at a members home. The antenna is a Ringo Ranger, and it is a single antenna, single sight system. It uses a 6 cavity, South Shore Electronics diplexer, and the antenna is up about 25 feet. The coverage is limited to the Cedar Rapids area by the low antenna height, but it should improve when they find a permanent location. (Editors Note; WRØAID can usually be worked from Iowa City using 10 watts and a gain antenna at a good elevation)

The Coaxial Dipole Antenna.... de KØØBU

This is an antenna that has not, to my knowledge, been used much in the Iowa City area. It is listed in the ARRL Handbook, and it has some interesting characteristics. Unlike its predecessor, 'the simple dipole', this antenna is very broad banded. Typically, the 2:1 SWR bandwidth is >500 KHz. This is without the aid of a 'match box' type device.

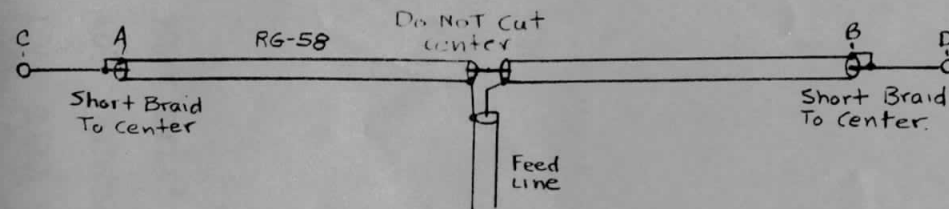
There are several reasons for this having such a wide bandwidth, one of which is the fact that this antenna is its own matching network. It electrically incorporates a balun, and also it has a large circular mil area resulting in a low 'Q'. Some users even claim gain over a dipole, but I don't think this is true, as a dipole is a dipole. But being a dc ground type antenna, there is no static charge build up, which eliminates the popping sounds heard in receivers during rain fall. Another advantage is the high attenuation of the harmonics of the transmitting frequency. This would make it a good antenna for those homebrew novice CW transmitters. It is also claimed that it is less affected by surrounding trees, buildings, etc. than the regular dipole, and non-directional.

The antenna consists of a half-wave section of coaxial line (RG-58 works well) with the sheath (braid) opened at the center and the feed lines attached to the open ends of the sheath (braid). The outside conductor acts as a half-wave dipole with the wire added to the ends and the inside section looks like a $1/4\lambda$ shorted stubs, which are high impedance at the feed point. See the figure.

This antenna is no longer than a regular $1/2\lambda$ dipole and can be made from RG-58 and will take 1 KW DC at low SWR. Remember to water-proof the ends of the coax and plexiglass or PVC works well for the mounting blocks. This antenna can be used as a flat dipole or a 'VEE' and when cut for the center of the 80 meter band, will operate from 3.5 to 4.0 MHz with an SWR < 2:1. One drawback is that this is a single band antenna.

continued next page

Coaxial antenna.... continued



$$A-B = \frac{325}{f \text{ MHz}}$$

$$80M: A-B=61' \\ C-A = B-D=29' 6''$$

$$C-D = \frac{460}{f \text{ MHz}}$$

$$40M: A-B=33' 6'' \\ C-A = B-D=14' 9''$$

If you need any more help or other ideas for antennas, see the old reliable ARRL Handbook or give me a call.

73 de Chuck, KØØBU

***** STRAYS *****

News voices to be heard on the local repeater are WAØDXZ, Bob and KØGVB, Gary. Well, if you look close there aren't really new, but not heard for a long time. They both have acquired new FM transceivers for the 2M band and were reported to be in the Physics building area putting them on frequency. Welcome back to the FM activity fellas. Bob has an ICOM IC-22A and Gary an IC-20.

Recent reports from North Carolina indicate that a certain TS-520 is doing double duty on the bands as Fred and Judy are both reported to be very active on the HF frequencies. Fred has to kick her out of the operating position when he returns home from making the Tooth-Fairy rounds, so he can work some of that good DX. Judy is reported to be in the unique position as a Novice of having worked more DX countries than US states. Sounds like a lot of 15 meter time' to us.
