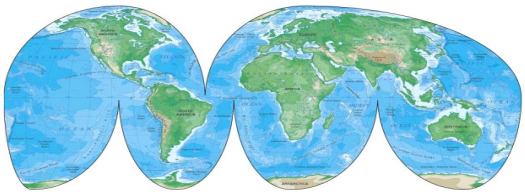
MOUNT VERNON AMATEUR RADIO CLUB

C  Q

May 2006 Newsletter

MEETINGS SECOND MONDAY OF THE MONTH AT THE RED CROSS ANNEX BUILDING,
300 N MULBERRY ST, MT. VERNON, OHIO
REPEATER FREQUENCIES: 146.790 (-) K8EEN /R 444.750 (+) KC8YED /R 53.790 (-) WA8YRS/R
SUNDAY NIGHT ARES NET AT 8:00 P.M ON THE K8EEN REPEATER OPEN TO ALL

FROM THE EDITOR

This month readers will see part II of the history of the Mt. Vernon Repeater. The series "Welcome to the 60's" is also in this Newsletter. Both of these articles began in the March 2006 Newsletter so if one wishes to refresh the old memory chip, now would be a good time to do a bit of rereading. March is still available for download at http://www.mvarc.net.

Reviewing the ARRL message form that appeared in last months issue, I decided that I was not happy with it. After doing a bit of research, I found that I did not leave enough space at the bottom for the senders signature. In my defense, the ARRL computer printout that I went by did not leave enough room either. I have modified this form and included some information that may help in filling the form out and sending or delivering them. This information was taken from files downloaded from the ARRL Web Page. The files are MPG104A.doc and MPG204A.doc. You may download the complete files themselves, if you are interested. I recommend everyone make a couple of copies of the message form and keep them handy for our Sunday Night Net.

More web sites that may be worth checking out:

http://www.w7arc.com/nts/

http://www.antennalaunchers.com/antlaunching.html

http://www.w0ipl.com/ECom/NVIS/NVISprop.htm

http://training.fema.gov/emiweb/IS/crslist.asp

http://www.wrrl.org/

DUES REDUCTION TO BE VOTED ON AT THE MAY MEETING
By Barry Butz, N8PPF

The club directors met April 4 and developed a proposal concerning dues. It was felt that membership might be encouraged by reducing the dues from $20 to $12. Cost reductions we have made in recent months should make this possible without jeopardizing the treasury. The proposal will be presented at the May meeting for consideration by the membership.

The parts of the bylaws involved are Article II, Sections 2 and 4. The existing and proposed wordings are below.

Existing bylaws:

SECTION 2. ADJUSTMENT OF DUES

The Board of Directors shall have the authority to reduce or remit the dues of any member if, in the opinion of the board, payment of said dues would be considered excessive. A member in retirement and no longer gainfully employed, or 65 years of age, may, upon request, be granted membership with all privileges but at just one-half the current annual dues.

If there is more than one licensed amateur in a family, one member only shall be required to pay full dues, each dependent duly licensed shall be required to pay half the annual membership fees. All such members wil1 enjoy full voting privileges and all other benefits of membership in the Corporation under this reduced membership fee provision.

SECTION 4. AMOUNT OF DUES

Annual dues are $20 for Active Membership.
Annual dues are $15 for Associate Membership.

Yearly membership starts on Jan.1 and ends on Dec.31 of the same calendar year. New hams who want to apply for membership in the middle of calendar year, will pay dues depending on the half of the year.

Jan.1 thru. June 30 will be 100%.

July 1 thru. Dec.31 will be 50%

Proposed revisions:

SECTION 2. ADJUSTMENT OF DUES

The Board of Directors shall have the authority to reduce or remit the dues of any member if, in the opinion of the board, payment of said dues would be considered excessive. A member in retirement and no longer gainfully employed, or 65 years of age, may, upon request, be granted membership with all privileges but at **reduced** annual dues.

If there is more than one licensed amateur in a family **and household**, one member only shall be required to pay full dues, each dependent duly licensed shall be required to pay **reduced** annual membership fees. All such members will enjoy full voting privileges and all other benefits of membership in the Corporation under this reduced membership fee provision.

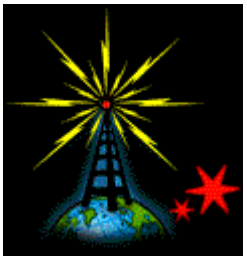
SECTION 4. AMOUNT OF DUES

Annual dues are **$12** for Active Membership.
Annual dues are **$10** for Associate Membership, **retired, senior, or additional family members**.

Yearly membership starts on Jan.1 and ends on Dec.31 of the same calendar year. **New hams applying for membership within the year will pay initial dues prorated according to the number of months remaining.**

By the directors, Don Bunner, KB8QPO
Barry Butz, N8PPF
Dick Huggins, WD8QHY

A HISTORY OF THE MT. VERNON REPEATER SYSTEM
PART II
By Don Russell, WA8YRS

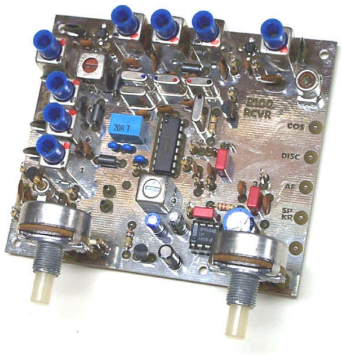


Repeater number two was actually just to move our first repeater out to what was then the Mt. Vernon Amateur Radio Clubs headquarters. It was off of Vincent Road. Carl Barcus owned the place and although he was a CB'er, he wanted awfully bad to be a ham. He was handicapped, but was always there at the meetings and really enjoyed Chuck and I bringing the repeater out there and the constant visits we had to make to keep it going. We added a 150 watt amplifier and 450 MHz. control. We also added two sections of tower so the receive antenna was at 60 feet. Coverage was much improved. We had some problems to the South, but North was real good. Chuck could start hitting the repeater just South of Mansfield. The main problem with this site was that the Mt. Vernon handhelds had trouble getting into it. After all, it was about five miles outside of Mt. Vernon; and not exactly line of site. You could do it, but you had to pick your spots. I am not real sure of the time frame, but I think this repeater was operational for six months to a year. This is about the time that the Club had enough members on 2 meters to warrant having the Club take some responsibility for the repeater. The club started paying the electric bill for it, although the treasury was not real strong at the time, so I helped out a little with my own money. Being single and living at home had its advantages. We had a group of six to ten members that were using the repeater regularly. I can remember one old timer saying that 2 meters was worthless: "You can't even get down the block on 2 meters!" he claimed. So, I whipped out my little handheld (okay, big handheld by today's standards) and talked to another ham in Columbus who was also on a hand held. The next meeting, the old timer had his own handheld clipped to his belt!

On to Repeater number three. Now that the club was involved, everyone wanted even better coverage than the one we had at the Club site. Like I said, coverage South was not very good. Royce "Woody" Woodward (W8PEN, SK), offered to let us set up the repeater at his home. He had a frequency measurement lab and a Broadcast Consulting business out on New Delaware Road. Height out there was 1350 feet above sea level! Sounded like a good deal. Since Woody only had a 50 foot telephone pole to hang antennas on, it was decided that a single sight operation was not going to be feasible. Duplexers were too expensive for us and not really readily available. After knocking around the idea of a split site, with the receiver at Woody's and the Transmitter maybe staying at the club site, Woody came up with the idea of a split site on his property. He had plenty of land, so horizontal separation was not a problem. Off to a ham fest we went again, this time with a little more cash in hand from the other members. We were able to locate about 10,000 feet insulated wire for a good price. I say good price because I can't really remember what we paid. While it was not in the plans, it immediately became apparent that we could run wires between the two sites instead of using uhf. We figured we could run five wires. two for audio and three for power and the COR line.

The next problem was the tower. We were able to find six good sections of used tower. Brushed down and painted, they looked pretty good. We bought three sections of new tower for the base. Shovel dug a 6 X 6 X 6 foot hole. Then we mixed our own cement and

poured the base. The tower was 90 feet high, with three sets of guys. The receiver at the base of the tower was a solid state HAMTRONICS (then called VHF Engineering) RF-144 receiver. It came it kit form, and I was the official kit builder. Buried about 3 inches underground were our 5 wires running back to the Lab where the transmitter was. The transmitter was also solid state and from HAMTRONICS. Power out was 25 watts. I built that one too. Chuck designed and built a totally new controller. This was a fun project and brought a lot of club members together.

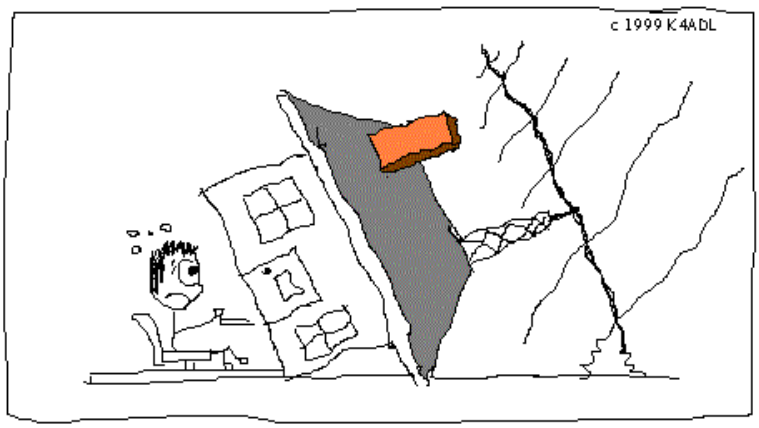


This repeater was a vast improvement over the previous two. I had no problems working into the repeater from Columbus, Mansfield, Wooster, etc. The one continuing drawback was the handheld coverage in Mt. Vernon. While better than the Club site repeater, it was far from perfect. We were four miles to the West instead of five miles to the East! I could easily work into the repeater from Morse Road and Cleveland Avenue with about 30 watts, but still had problems hitting the repeater with a hand held and a rubber duckie from most parts of Mt. Vernon. The crew was thinking about putting a remote receiver site somewhere in Mt. Vernon to fix this, but that was never done. I think we were all starting to get burned out on the repeater stuff. We had a repeater with fantastic coverage in most aspects and were happy with that.

This repeater was on line for many years. Not sure how many, but I would say at least into the early 1980's. Like I say, the time frame on all of this is a little foggy. Too bad I didn't save all the paper work and stuff that we had. Chuck had married and moved to Columbus. I was still living in Mt. Vernon, married to Darlene, and not active on ham radio at the time. As I drifted away from repeater maintenance, Jim Woodland (WB8AYM, SK) kept trust of the repeater. While Jim could not do any technical work on it, he was a good keeper. He kept in touch with me and I would bail him out when things started to go bad. Actually the repeater required very little maintenance time.

Someone else took over as repeater tech somewhere along this time frame. Before it move out of Woody's measurement lab. Then Woody (W8PEN) passed away and the repeater had to be moved. I was not a part of this, but from what I hear, taking down the 90 foot tower was a challenge! They used a pipe cutter to cut one leg at the bottom. Then let loose a couple of the guy wires. The theory was for it to come crashing down in the correct direction. Wrong! Apparently, the tower stopped falling at about a 45 degree angle. Someone had to walk up the town and ride it down, along with a little pulling of the guy wires. WOW! I think a repeater was installed at the Cable Company tower. Seems like there was a ham who was WMVO's engineer for a while. From what I understand, this repeater was pretty decent, but had some intermode problems being so close to WMVO. Bob Bruff (N8PCE) could probably fill us in here. Lets call this repeater number 4.

Next month we will check out Repeater number 5 and beyond.



DONALD HAD BEEN WARNED TO CENTER THE 40 METER BEAM ON HIS ROOF.

ComPIOnents, May 2006
By Mike McCardel, KC8YLD

Corrections: In last month's comments about the Public Service Honor Roll, I erroneously reported that Assistant ECs qualified for 10 points under category *3) Serving in an ARRL-sponsored volunteer position.* Steve Ewald, WV1X, at ARRL Headquarters clarifies "…since the Assistant EC position is not an official Field Organization position that is appointed by the SM and/or SEC, the Assistant EC position does not qualify for the 10 points under Category 3."

Also, I mistyped Bob McBride's Callsign as the NCS station for the March 26 KCARES Net. Bob's callsign, of course, is N8QPM not N8QPN.

I apologize for any confusion.

MVARC Meeting Monday May 8, 2006 7pm at the American Red Cross Training Center, 300 N Mulberry, Mount Vernon, OH

John Chapman, WB8INY

Ohio Section ARES Conference — Expect Change

Attendees to April 22nds Ohio Section ARES Conference were told to expect change. The first change was a surprise. John Chapman, WB8INY, State Emergency Coordinator since November 2003, announced his resignation affective June 1 or pending a replacement.

"The process of starting up and running my new business is consuming most of my time," he told the conference of County Emergency Coordinators and their staffs; "I don't think it is fair to my family or to the Ohio Section to continue."

Ohio Section Manager Joe Phillips, K8QOE, will be accepting nominations for the SEC position through May 5, Hopes to have the selections narrowed for personal interviews by May 10, and has set a goal to announce the new SEC by the beginning of Hamvention, May 19. Any ARRL member may suggest a candidate or offer his or her services as the next SEC. Either call or E-mail the Section Manager at 513-874-0006 or jphillips@arrl.org .

Chapman's last official project as SEC will be revising the Ohio district map from nine to eight areas to conform to Homeland Security Ohio districts. The current nine districts were devised to align the Section Organization with Skywarn. With the NWS repositioning radar, a few years ago, came a redistricting of Skywarn that no longer is in alignment with the Section Districting. Currently Knox County is in the 6th Sectional District and Skywarn's District 3. The proposed alignment would align our districts with The Department of Homeland Security Districting of Ohio. This would pretty much split the current District 6 in half. Knox County would no longer be aligned with Richland, Ashland and Holmes, but would become part of the District with Licking, Morrow, Delaware, Franklin and others in Central Ohio, in accordance with Homeland Security District 4.

In other changes, the conference was told to expect a fairly complete restructuring of ARES. These changes could be rather sweeping. These changes are currently open ended. However, they could go as far to result in a name change. Other areas that could change with the structuring might include:

—How Assistant SECs and Assistant DECs are appointed as well as increasing their authority.

—Development of a National Response Database that would require pre-registration, screening and verification of each participant in advance of, and as a requirement for deployment.

—Upgrading minimum entry level requirements for SECs, DECs and ECs beyond being an ARRL member and holding a Technicians license.

—Becoming recognized as a full NGO (Non-Government Organization), which might include resource typing and formation of response teams. (For information about resource typing visit:

http://www.nimsonline.com/nims_3_04/national_incident_management_resource_typing_system.htm

For more information about a proposed Amateur Radio Communications Team (ARCT) resource for the Communication Category visit:

http://www.emcomm.org/ARCT/

The conference discussed the Ohio Citizen Corps

Volunteer Reception Centers and ARES mandate to support their communications. Volunteer reception Centers will be clearing houses for volunteers without an affiliation to an NGO or other support organizations, i.e. volunteers who just show up. They will be run by Citizen Corps / C.E.R.T. teams in Ohio. These will utilize accepted protocols for professional volunteer management through:

1. Registration
2. Interviewing
3. Screening
4. Training
5. Referral and placement of spontaneous volunteers

The conference, on two occasions, divided up into small groups. First to brainstorm how the redistricting may or may not Impact us. The second was to brainstorm how ARES/Emcomm needs to evolve for the future. The conference also met the newly appointed State Government Liaison, Nick Pittner, WB8TMF, received section news updates, broke for a Pizza lunch and were

given a tour of the Ohio EOC.

Full Scale SET scheduled for Knox County May 13

Are we ready? During the March meeting we were asked by Red Cross Director David Gore to, if necessary, support communications for the Red Cross during the event. Mr. Keith Hughes, the Red Cross representative for the SET and one on the SET's design committee, will be joining us at the MVARC meeting Monday May 8 at the Red Cross to brief us on our participation. Because of the nature of SETs he won't be able to divulge many details, but I understand he will share suggested time lines and whom we may be supporting. I encourage all Amateur Radio Operators who may be interested to join us at the meeting and make themselves available as is possible for the SET.

Vote on By-Laws and Due Change

At the last meeting the Board made a recommendation that we amend the By-Laws to reduce the yearly membership dues. The proposal will be put to a vote at the May 8th meeting.

DAYTON HAMVENTION May 19, 20, 21

Visit http://www.hamvention.org/

KUDOS

David Patton, KC8UTL was listed in the May issue of QST among those Hams who qualified for the Public Service Honor Roll (PSHR). Patton is a Net Control Station for the Ohio Single Side Band Net (OSSBN) and serves as the morning net statistician for OSSBN. He is also an Assistant Emergency Coordinator for KCARES. For a list of all who qualified for PSHR as well as the Brass Pounder's League see page 80 of the May QST. For more information on PSHR see last months Newsletter or visit http://www.arrl.org/FandES/field/pshr/

KCARES NET

Meets every Sunday at 8pm on 146.790 FM, offset is –600KHz. The net is part of the National Traffic System.

You do not need to a member of the Mount Vernon Amateur Radio Club or the Knox County ARES to participate. The Net is open to all Amateur Radio Operators.

April Net Statistics, to date

APRIL 2, 2006

N8QPM, NCS,	BOB, EC
WDHQHY,	DICK
KC8YLD,	MIKE, PIO
WA8YRS,	DON
N8PPF,	BARRY
N8QHY,	BARBARA
KC8YED,	MIKE
N8KBR,	EARL
AAWP,	DOC

9 CHECK INS, 1 TRAFFIC, 24 MINUTES

APRIL 9, 2006

KC8YLD,	NCS, MIKE, PIO
KI0DZ,	MARY FLORENCE,
N8QPM,	BOB, EC
N8PPF,	BARRY
KF8ZL,	HOWARD
N8SMT,	JEFF
WD8QHY,	DICK
KC8ZWS,	TIM
AA8WP,	DOC
KC8YED,	STEVE
KC8JEZ,	MIKE
N8QHY,	BARBARA
WA8YRS,	DON
KD8KDR,	JASON
KB8RKW,	CRAIG

15 CHECK INS, 1 TRAFFIC, 26 MINUTES

APRIL 16, 2006

N8QPM,	NCS, BOB, EC
KC8UTL,	DAVID
KC8YLD,	MIKE, PIO
KC8GBY,	JERRY
KC8YED,	STEVE
N8QHY,	BARBARA
AA8WP,	DOC
N8PPF,	BARRY
KC8JEZ,	MIKE

9 CHECK INS, 1 TRAFFIC, 21 MINUTES

APRIL 23, 2006

WA8YRS,	NCS, DON
KC8YLD,	MIKE, PIO
KC8UTL,	DAVID
N8QPM,	BOB, EC
N8QHY,	BARBARA
KC8YED,	STEVE
KC8JEZ,	MIKE
WD8QHY,	DICK
AA8WP,	DOC

10 CHECK INS, 3 TRAFFIC, 32 MINUTES

APRIL 14, 2006 WEATHER WARNING ACTIVATION

N8QHY, NCS, BOB, EC
KC8YLD, MIKE
WA8YRS, DON

REPEATERS AND STUFF
BY DON RUSSELL, WA8YRS

Looks like the club is going to be busy the next few months. This month there is a County wide Simulated Emergency Test in which the ARES is hoping to participate in. Please put May 13, 2006 on your calendar to help out with this event. Everyone knows that my main enjoyment in Ham Radio is operating contests and playing with antennas. However, I also realize that as Amateur Radio Operators, we have a responsibility to help out in times of need with our unique ability to provide reliable and accurate communications. I have therefore set aside May 13 to help out. Please do the same.

June is of course Field Day. Field Day will be different this year in that we hope to run the event from the Red Cross location. This is another event that allows us to "Show Off" Ham Radio. We are planning for two SSB stations and one QRP CW station. The CW station may be run with solar power and a battery just for the fun of it. Looks like Doc, AA8WP, will finally get his wish, and we will be trying to make a few satellite contacts. I have obtained a little experience in this area, which I will explain later.

Then August is the Ohio QSO Party. The club has not participated in this one for a couple of years. The last time we did, Phil, N1GTZ, Doc, AA8WP, Steve, KC8YED, and myself, Don, WA8YRS, were the main operators. I am thinking of hosting this event again. Or we could make plans to use the Field Day site at the Fair Grounds.

In anticipation of the two operating events mentioned above, I have registered the logging programs for Field Day and the Ohio QSO party. The Field Day logger is the same one we have been using, except it will allow us to network all the computers together via wireless cards. In this way, each station will have the current log of all contacts made, including our score. I am hoping to test this out at the June meeting. It should be fun. There will be two or three computers running the logging program. Then one person can read the Field Day exchange information as someone else enters it into the logger. With three computers, there will be a need for at least six club members to make this work. Doing this will assure the group that everything is going to work together when Field Day eventually rolls around.

The following item should be titled "Confessions of a Rookie Satellite Operator".

As I mentioned above, I have been toying with making satellite contacts through several of the many Amateur Radio built satellites we now have in orbit. This has been a very fun but sometimes frustrating adventure.

What got me into this was reading about the Ham operations aboard the International Space Station. At first that was my goal. To make a contact with the Space Station. That is still my eventual goal, but I have been side tracked and perhaps hooked on talking through the satellites. This has not come about suddenly. I joined the Amateur Radio Satellite Corporation (AMSAT) early last year with the intentions of getting active on the Satellites. It just took me a while to get started.

My first project was to see if I could "hear" any of the Satellites. This step involved downloading orbit tracking software (there are several freeware versions out there) so that I would know when a Satellite was in reach and which way to point the antennas. Then I tuned into several of the "FM Birds" that are available. Remember the article a few months back in the Newsletter about AO-51? Well, it is harder than it sounds! I could not hear the AO-51 with just a hand held and a rubber ducky. I tried for about a week. Not a big deal. (I later learned that the AO-51 is not always on. It could have been off when I was trying. I just figured it was on all the time). I decided it would be a good idea build a UHF beam antenna so I could pull in the UHF downlink frequency. I was impressed with the Tape Measure Fox Hunt antenna that Jeff, N8SMT, had brought to one our meetings last year. I am not sure how many were built at that meeting, but quite a few. I built my own later. Anyway, I redesigned the antenna to operate on UHF instead of VHF. Since the antenna would be smaller, I decided to add a couple of extra elements to it. Using the same YAGI design program that the original author of the tape measure fox hunt antenna used, I designed a five element UHF antenna to use for my Satellite adventures.

The built antenna had an SWR of about 1.5 to 1. I could not get it any lower. Close enough I thought. The first satellite I tried to hear with this antenna was the F0-29 Bird. This satellite runs on CW and SSB. I used my QRP FT-817 as the receiver and pointed the antenna towards the sky. Just as I was doing this, here comes

Jeff, N8SMT, up my driveway. He was headed to his Brother Barry, N8PPF, who lives just up the hill from me. I guess curiosity got to him and he just had to see what I was up to. Anyway, Jeff and I did hear some activity on the satellite, but it was real weak. I had heard that this satellite required large beam antennas, so I was pleased with just hearing a few stations. I was wrong. Actually, even with a simple antenna, this satellite is pretty easy to hear. I later found out that my antenna really did not work at all. It was almost a dummy load! I figured it was a design flaw on my part rather than a construction error (although with my skills, construction errors are always a possibility!) and took the antenna apart.

My next attempt was to build a two element quad for UHF. Now, this antenna worked pretty decent and I was actually able to hear some strong signals from several different satellites, including the F0-29 and A0-50. I thought I was on my way. Next step was to build the VHF transmitting antenna and put it on the same boom as the UHF antenna so that I could hold the antenna towards the sky and work the Satellites! My XYL, Darlene, was wondering what our neighbors were thinking when they saw me? At least she knew what I was trying to do and was properly impressed……NOT!

I figured the transmitting antenna might as well be a quad too, so I designed a two element VHF quad to match the UHF one. This turned out pretty good too and I was ready to try an actual QSO with another satellite station. Or so I thought. Attempts at using one of these satellites was frustrating at best. I could hear the birds fairly well, but not as good as I needed to. Copy would not be good until the Sat was well above the horizon. That meant that I generally had five minutes to try and make a contact instead of the 10 to 15 minutes I should have had. Also, there were a lot of stations trying to do the same thing. I am too polite to just pile on top of them! Back to the drawing board to find a better UHF receive antenna.

Surfing the web for an easy to build, easy to match beam, I discovered the 8 element Quagi. Quagi? What the devil is a quagi? Well, let me tell you; a quaigi is a cross between a Quad and a Yagi antenna. Thus the Quagi. While a quad uses square loops for reflector, driven element, and directors; and a yagi uses straight elements for the whole antenna; a quagi uses loops for the driven element and reflector, and the directors are made of straight rod stock. The first version of the quagi has been in the Amateur Radio Handbook and the ARRL Antenna Book for years. The quagi I found on the internet uses ½ PCV pipe as the boom and number 10 or number 12 wire as the loops and director elements. I actually modified this a bit and used welding rod stock for the director elements. It made the antenna a bit heavier, but much more sturdy.

At any rate, this antenna was easy to tune and works like a charm. Signals from the FM satellites are strong and full quieting. Signals from the CW/SSB birds are very loud. I would say this one is a keeper. Using this Quagi antenna and my FT-817 as the downlink equipment, and my mobile rig with a 5/8 wave magnet mount, I made my first Satellite contact. It was on the SO-50 FM satellite. Signals were very strong both ways. Since I was monitoring the satellite as I was talking, I was able to hear myself on the satellite. That was cool.

Was I happy with this set up? Well, no. It takes too many hands! One hand to hold the antenna and keep it pointed at the satellite. One hand to hold the microphone. One radio strapped around your neck. The other in the car where you have to stretch the microphone cable. To make matters worse, due to the Doppler effect, I had to continually tune the FT-817 to keep the satellite tuned in. The downlink frequency of a satellite varies as much as 15Khz. As it crosses the sky. Not really ideal. I used a tape recorder to tape the QSO so I could remember who I worked and enter it in my log.

So, I found a design for what I thought was a pretty decent omni directional UHF antenna. Using this antenna made sense. I would not have to hold the antenna and point it at the satellite. That would free up one hand. I am not entirely disappointed in the antenna. The signals are much weaker than with the beam antenna, but that is to be expected. However, due to the weak signals, I decided on a different route (again!).

This year at the Mansfield Hamfest, I bought a used tripod. I had it in mind one day using it for portable satellite work. Well, today is the day!

I mounted my UHF Quagi antenna, and my VHF Fox Hunt antenna on the tripod. The antennas are only about ten inches apart. I can steer this set up with one hand, and I only need to make adjustments three or four times during a satellite pass. For the FM satellites, I use my FT-817 for receive, and one of my hand held VX-5's for transmit. I can set this up on my back deck, sit in a chair, and easily talk through a satellite passing by. Since I do not have to hold the antenna, I have a hand free to write things down before I forget them (this means immediately!). I can also touch up the receiver when needed. This system is working out well and I have made several QSO's through the FM birds. I have an idea that using the CW/SSB satellites will be easier because they are less active, and actually have room to move around. There can be many QSO's taking place on these satellites, giving them a big advantage over the FM birds.

Will this work for Field Day? Absolutely. But the satellites will be very crowded and the chance of success will be about 50/50. It should prove interesting though.

73, Don, WA8YRS

WELCOME TO THE 60'S
By
Don Russell,WA8YRS

- **The Heathkit DX-35**
- **Phone or CW--80 through 10 meters**
- **65 watts CW--50 watts peak on phone-**
- **6146 final amplifier**
- **Pi network output to match various antenna impedances**

In April, I introduced my first receiver, the Knight Kit Span Master. If I recall, I was first licensed as a Novice Class ham in November or December of 1964. Funny, I always thought I was first licensed in 1963, but the later date is the only one that works out. My brother Chuck was already in College at the University of Dayton. I was a Freshman in High School. Anyway, My novice call was WN8ODK.

My parents bought me a used Heathkit DX-35 for Christmas. I am sure Chuck chose the transmitter, as I knew very little about this stuff yet. Chuck also brought home a Heathkit Antenna Tuner, an AC-1.

The DX-35 transmitter featured a 6146 final amplifier to provide 65 watt plate power input on CW and AM modulation (or about 40 watts out). The power supply was built in, and the transmitter covered 80, 40, 20, 15, and 10 meters with a single band-change switch. The Pi network output coupling provided a matching to various antenna impedances.

The DX-35 used a 12BY7 oscillator, 12BY7 buffer and 6146 final. The speech amplifier was a 12AX7, and a 12AU7 was used to provide modulation. Panel control provided switch selection of three different crystals. You installed these crystals through a door in the back of the rig. Panel meter indicated final grid current or final plate current. By the way, Novices were not allowed to use VFO's in the 60's. They had to use crystals to control their frequency. The term of the decade was "Novices were Rock Bound".

The Heathkit AC-1 was an antenna tuner mainly for long wire antennas. You would bring the long wire right into the shack and attach it to the top front of the tuner. Refer to the picture. On the left was the coil tap switch and on the right was the capacitor tuning. Right in the middle there was a neon light that you would tune the controls for maximum brightness. That is how you knew the antenna was tuned and you were putting out some power. Relative is the key word here! Oh, and see the insulator and nut at the top? That is where the antenna wire went.

So, Christmas of 1964 found Chuck and I putting up our first true ham antenna. It was sort of an inverted V, but we paid no attention to length. Novices were not real good at figuring antennas out! As I recall, the antenna lead came in through a window. It was not coax, it was just antenna wire! I think electric fence wire!

Okay. We spent the next week trying to make our first contact. While we seemed to receive okay, nobody could hear us. The solution amazed us! Oh, you need to put insulators in the antenna wire and not attach the ends of the antenna directly to the metal roof? Now who could have figured that out?

From there on out, contacts came at a fast clip. My first QSO was with a ham in Ashtabula, Ohio. I still have his card somewhere (I hope). Later, we graduated to a dipole antenna with true coax lead in.

A few odds and ends to this station were the knife switch we used to change the antenna from the transmitter to the receiver and a J-38 straight key, which I still use to this day. Of course the log book. In those days hams had to keep a complete log book of all station activities, even unanswered CQ's. In some ways I wish the FCC would require this again. I have all my log books stashed For the record, in my first year as a ham, I worked 35 states and four or five countries. What a blast!

The American Radio Relay League
RADIOGRAM
Via Amateur Radio

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date

To

This Radio Message was received at:
Amateur Station_____ Date_____
Name_____
Street Address_____
City, State, Zip_____

Telephone Number:

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

From Date Time	To Date Time
REC'D	**SENT**

A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating, a "Ham" Operator can accept no compensation. A return message may be filed with the "Ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225, Main Street, Newington, CT 06111.

The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One of its functions is promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System for daily nationwide message handling.

PRECEDENCES

EMERGENCY (Spelled out on form.):
Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. On CW/RTTY, this designation will always be spelled out. When in doubt, do not use it.

PRIORITY (P):
Use abbreviation P on CW/RTTY. This classification is for a) important messages having a specific time limit, b) official messages not covered in the emergency category, c) press dispatches and emergency related traffic not of the utmost urgency, d) notice of death or injury in a disaster area, personal or official.

WELFARE (W):
This classification, abbreviated as W on CW/RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

ROUTINE (R):
Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine (R on CW/RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic.

Notes: These precedences are not meant to prohibit handling lower level traffic until all higher levels are passed. Common sense dictates handling higher precedence traffic before lower when possible and/or outlets are available.

HANDLING INSTRUCTIONS

HXA__ (Followed by number.) Collect landline delivery authorized by addressee within [....] miles, (If no number, authorization is unlimited.).

HXB__ (Followed by number.) Cancel message if not delivered within [....] hours of filing time; service originating station.

HXC Report date and time of delivery of the message back to the originating station.

HXD Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered, report date and time and method of delivery (by service message).

HXE Delivering station get reply from addressee, originate message back.

HXF__ (Followed by a number.) Hold delivery until [date].

HXG Delivery by mail or landline toll call not required. If toll call or other expense involved, cancel message and send service message back to originating station.

PUNCTUATION characters are not used in the text except as follows:

/: The slash, "/", is used to separate characters within a group, as in 304/BA. Since the "/" is part of the group it does not qualify as a separate group for the check. Although usually not used as a group by itself (a space on the left and on the right), if so used it would be counted in the check.

X: The letter "X" used to denote a period. The letter "X" is never used as the last group of the text. The "X" is a separate group and IS counted for the check.

R: The letter "R" is used in place of a decimal in mixed figure groups, as in 7013R5 (7013.5), or 146R670 (146.670). Since the "R" is part of the group It does not qualify as a separate group for the check. (The inclusion of the "R" makes the group a "mixed group" for transmission on voice.)

TEXT

The text contains the actual message information authorized by the person for whom the message was originated. Note that the amateur does not originate messages for a person without permission from that person!

The text is entered in section 3 of the message form. (When transmitting a message, the text is separated from the preceding address, and the signature to follow, by the use of the word "BREAK" on voice, the prosign <BT> on CW, to allow the receiving operator to know its beginning and end. BREAK and <BT> are not counted as groups.)

The text is divided into word "groups", five or ten to a line for easy counting, and is usually limited to 25 words or less. Example:

ARL	FORTY	SIX	X	DO
YOU	WANT	THE	304/BA	EQUIPMENT
QUERY	THE	SIX	DASH	B
TYPE	IS	NO	LONGER	AVAILABLE
X	CU	ON	7013R5	73

Note the use of "X", "QUERY", "/", "DASH", “R” and spelled-out numbers for the ARRL numbered radiogram "ARL FORTY SIX". The check is ARL 25

COUNTING WORD GROUPS FOR THE CHECK

The number value to be entered in the "CHECK" is the total number of groups in the text.

An easy rule to remember about counting word groups: ANY GROUP OF ONE OR MORE CONSECUTIVE CHARACTERS WITH NO INTERRUPTING SPACES, WITH A SPACE BEFORE IT AND AFTER IT, IS COUNTED AS ONE GROUP

PHONETIC ALPHABET

All operators should memorize the phonetic alphabet and number pronunciation, and be fluent in spelling groups using phonetics. Practice off the air by sending text to yourself with phonetics.

A	ALFA	M	MIKE	Y	YANKEE
B	BRAVO	N	NOVEMBER	Z	ZULU
C	CHARLIE	O	OSCAR	1	ONE
D	DELTA	P	PAPA (PA-PA')	2	TWO
E	ECHO	Q	QUEBEC (KAY-BEK')	3	THREE (TREE)
F	FOXTROT	R	ROMEO	4	FOUR
G	GOLF	S	SIERRA	5	FIVE (FIFE)
H	HOTEL	T	TANGO	6	SIX
I	INDIA	U	UNIFORM	7	SEVEN
J	JULIETT	V	VICTOR	8	EIGHT
K	KILO	W	WHISKEY	9	NINE (NINER)
L	LIMA	X	X-RAY	0	ZERO