

# Ham Rag

Rockford Amateur Radio Association



OH THAT? I JIST RAISED IT FER A  
QUARTER WAVE ON 2 METERS AN'  
WORKED LU16XX WITH 5 WATTS.

**RARA Meeting, October 14, 1983**  
**7:00 p.m. - Rock Valley College**  
**Room 222 - Class Room Building 1**

# President's Log



This last month seems to have gone by rather fast. I'm sure the last weeks of summer catches most of us with all kinds of work to be done on the QTH's, not to mention last minute repairs of antennas. And in some cases, some new installations still in progress.

Last month's meeting brings us back into our regular schedule and we have some rather nice plans ahead. At this time, I would like to thank Bob Hajek, W9QGH, from Riverside, Illinois for traveling here to present to us a most enjoyable and informative program. Bob talked to us and answered many questions on ARES (*Amateur Radio Emergency Service*) and RACES (*Radio Amateur Civil Emergency Service*). Also thanks to Paul, KR9P, for arranging for Bob to be here. Paul is now our local Emergency Coordinator.

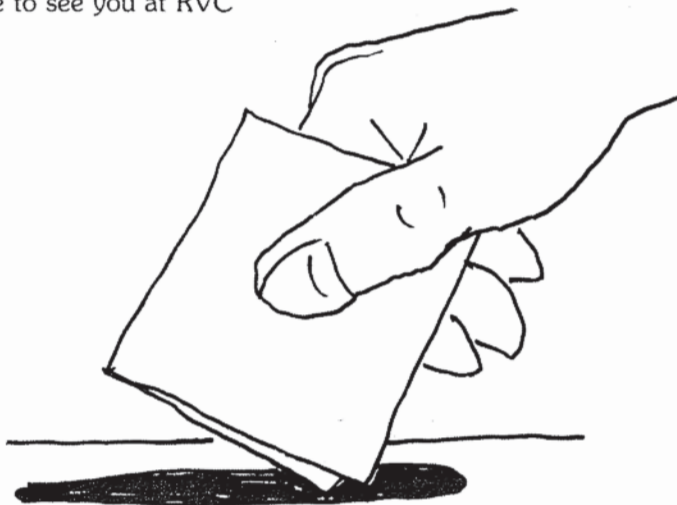
I would like to urge all of you to try and make this month's meeting. This is our usual time to vote on the Club Officers for the next year. I've tried to get some information out of the nominating committee, but they're not talking. At least, not to me. It's important that you come, vote and be heard from. Seems funny to hear me that I don't hear or see any campaigning going on.

Also, we will be learning about and seeing a video of Astronaut Owen K. Garriott, W5LFL, covered elsewhere in this issue.

With some last minute re-arrangements, our Novice class is again underway. Good luck teachers and Thanks!!!

Again, Hope to see you at RVC

73, Bob, WA9NTT



# Editor's QRM

*"And finally in tonight's news, a report from Fresno, California, that the last known Amateur Radio Operator has died. John Smith, better known to his old time radio friends as NGFB6R, was at his transmitter trying desperately to find someone to talk with, when he died of exhaustion. He was 105."*

Fiction? of course --- today. Sixty years from now, maybe not. Most hams today are between 35 and 40. Of the approx. 400,000 amateurs in the U.S. fewer than 8,000 are under the age of 30. Only 4,000 are in their teens. Fewer kids are becoming hams today, often because they simply never hear about our hobby.

Perhaps you read the article in the October issue of *QST* that begins this way. What this article says is that it is time for us to come out from behind our rigs and go straight to the public -- young people in particular -- the message: *the fun of being a ham*. To get things going ARRL is introducing a nationwide recruitment program that will reach out and **GRAB** those would be hams. This program is **"Ham Radio On The Road" (HROTR)**.

HROTH has been developed to recruit new amateurs by going to places where kids already gather -- scout troops, 4-H Clubs, schools, even computer clubs -- setting up an amateur station at their meeting place and showing them what amateur radio is all about.

HROTH is an aggressive program, and this is what sets it apart from the other recruitment programs in the past. It is going out and recruiting new hams instead of waiting for them to come to us. It is not enough to post a licensing class notice and wait for prospective hams to knock down the door. For example, a club which in the past might have mailed Novics class notice to Scout Troops, now has to do more. Call each scoutmaster and tell him our club would like to show your troop what ham radio is all about. Can we set up a station and get your boys on the air *during your meeting*? If they are interested set up a couple of dates, put a team together and let the scoutmaster know which date is best. Saying what date is best is far better than asking *"Would you like us to come down sometime?"* Get a firm commitment. Remember, however, before you start making phone calls, make sure your club is ready to *"hit the road"*. After all, the youth leader might say, *"How about next Monday?"* You'd best be prepared.

Some of the major organizations that provide service to youth are: Boy Scouts of America, Girl Scouts of the U.S.A., Boy's Clubs/Girl's Clubs of America, Campfire International, 4-H Clubs, YMCA's/YWCA's. How about it gang? I'll have more at the October meeting.

**WB9SFT, ACC, Illinois Section**

# Tech Topics

The final stages of getting antennas up are under way at various places around town; and we are closing in on the last few hamfests of this season. I'm noticing that it seems to be getting dark in time for the nest on Monday. This means that we will have more time for reading the various magazines and getting ideas for things to build. Please note--when reading those, that for many small projects you don't have to be an electronics engineer to build them. Anyway, while some of us are working DX, and others are waiting for another contest, there is bound to be a hombrewer (*hacker if he's working in a computer*) relying on a soldering iron for heat in the shack (*instead of a linear*). This presents a problem, because cheap electronic parts are not easy to find about town. There's always Radio Shack in emergencies, and between J&M Electronics and Mid-West Associated you can find many of the parts needed, but the price of the project goes up quick, and there's money to be saved at some of the mail order places. The problem here is the catalog for those places don't show up quite as automatically as the Sears flyers and the books full of trinkets. So where do you go? The ham magazines give some suggestions with the articles and sometimes offer kits, but it seems like there aren't many ads for components. Never fear, there are places to get parts reasonably priced and quickly. The following list will get you started if you are looking for parts, particularly components. Outfits handling stuff unique to the ham radio needs can be found in the magazines.

These below are outfits that have been used successfully by a few of local hombrewers. Particular specialities are noted where applicable.

## **Dynaclad Industries**

P.O. Box 296

Meadowlands, PA 15347

Catalog was \$150 last year

*printed circuit boards for magazine article projects.*

## **Jameco Electronics**

1355 Shoreway Road

Belmont, CA 94002

415/592-8097 phone

## **Radio Kit**

Box 411

Greenville, NH

*kits for article projects, Ham Radio unique comp.*

## **Digi-Key Corporation**

Highway 32 South

P.O. Box 677

Thief River Falls, MN 56701

218/681-6674

## **The Partstore**

999 44th Street

Marion, IA 52302

319/373-1803

319/849-2000

## **Amidon Associates**

12033 Otsego Street

North Hollywood, CA 91607

toriod cores for shokes, transformers, baluns

## **Sintec Electronics**

Drawer Q

Milford, NJ 08848

## **Fuji Svea, Inc.**

P.O. Box 3375

Torrance, CA 90510

connectors, cables\*, tools, test equipment

*\*yes, some of those 60 and 75 cent cheater cords and CB cords will fit the back of your 2M rig.*

# Micro/Digital Corner

I'm sure that the next year will be very interesting in watching what computer companies stay in business. Just a few days ago the newspapers carried the story of the Osborn Computers going by the way-side. It wasn't that they didn't have a good product, because they did, it's just that there are too many computer companies for the amount of people buying them. I wonder who will be left this time next year???

The following program was submitted by Gene, AK9N. It is used for sorting 10/10 numbers. It is written for the Texas Instrument Computer, but I'm sure it could be adapted for others easily. If anyone else has an interesting program, get me a listing so we can print it providing there is space available.

## 10/10 SORTING PROGRAM

```
10 REM-TEN/TEN NUMBER SORT
20 OPTION BASE 1
30 DIM X$(100)
40 CALL CLEAR
40 DISPLAY AT(4,4):"ENTER NOS. AS PROMPTED,": " ENTER A "." TO HALT": " INPUT.
"
50 FOR I=1 TO 100
60 DISPLAY AT(10,4):"ENTER #":I: " -"
70 ACCEPT AT(10,17):X$(I)
75 IF X$(I)="" THEN 100
80 IF LEN(X$(I)) > 10 THEN GOSUB 250
85 IF I=100 THEN 100
90 NEXT I
100 REM-SORT ROUTINE
105 DISPLAY AT(15,4):"SORTING"
110 FOR W=1 TO I-1
120 FOR Z=1 TO I-1
130 IF X$(Z) < X$(Z+1) THEN 170
140 B=X$(Z+1)
150 X$(Z+1)=X$(Z)
160 X$(Z)=B
170 NEXT Z
180 NEXT W
190 REM-OUTPUT ROUTINE
191 CALL CLEAR
192 DISPLAY AT(15,4):"OUTPUT READY. ANY KEY": " TO CONTINUE,": " HOLD KEY TO S
ROLL."
193 CALL KEY(0,Y,ST)
194 IF ST=0 THEN 197
200 FOR C=1 TO I
210 PRINT X$(C)
212 CALL KEY(0,Y,ST)
214 IF ST=0 THEN 210
220 NEXT C
230 END
240 REM-ALL ENTRIES MADE 5 DIGITS
250 FOR D=1 TO 4
260 X$(I)="0"X$(I)
270 IF LEN(X$(I))=5 THEN 290
280 NEXT D
290 RETURN
```

## TEN-TEN SORT NOTES

- Line 40 — Display at (4,4) - Print starting at row 4, col 4
- Line 70 — Accept at (10,4) - input, cursor is at row 10, col 4
- Line 130 — Routine sorts from small to large  
turn inequality around to sort large to small

No **lockout** for non-numeric data - could easily be added

See you next month,  
Gene, WB9MMM

# CQ DX October

Each time that the deadline for this column rears its ugly head, I sit down in front of the typewriter and try to come up with a snappy opening for the article. Well, I think you have just read the snappy opening for this month. Something about winding roads and classical music making it hard to think.

Last month there was an oblique reference to a contest of some kind between myself and KI9G. I somehow managed to insert most of the toes on my left foot and chew on them for a while. The gist of this contest is to work and confirm 100 countries on CW. Whoever hets there first is treated to an Italian *feast* at an eating establishment of the loser's choice. According to Carol the battle is completely fair. She gets to use a tall tower, big beam, bigger linear, and all of her feminine wiles. Yours truly is plugging along with a HW-8 (*almost 2 watts output*). What do they say about engaging brain before putting mount into gear? I also wonder how much guest operators are going to contribute to the payoff (*right Gary?*).

Sending your QSL cards off through the outgoing DX bureau hasn't been mentioned for a while so perhaps it is time again. For starters you have to be a member of RARA and a member of the ARRL. Bring your cards (*sorted according to the DXCC countries list*) along with mailing label from QST to the club meeting and drop them on either K9LJN or AK9N. Everything else will be taken care of. The cost to you is zilch, nil, free, etc. You just have to work your own DX. Club membership is \$10 per year. To send your cards in yourself cost \$1.00 per month minimum, Right away is a couple of dollars in the pocket plus the cost of stamps, a box or envelope, and a trip past the post office. Dig out your April issue of the *Ham Rag* for more information on ways to get your DX cards on their way.

There was a small new item in the local newspaper last week that might be of interest to the prefix chasers. It seems that St. Kitts/Nevis (*VP2K in the Caribbean*) has recently gained its independence from England. So we should be seeing a new prefix coming from that part of the world before too long.

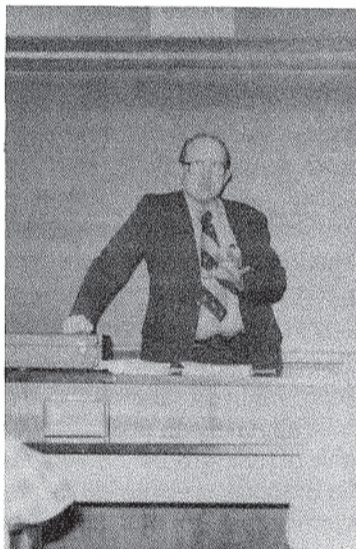
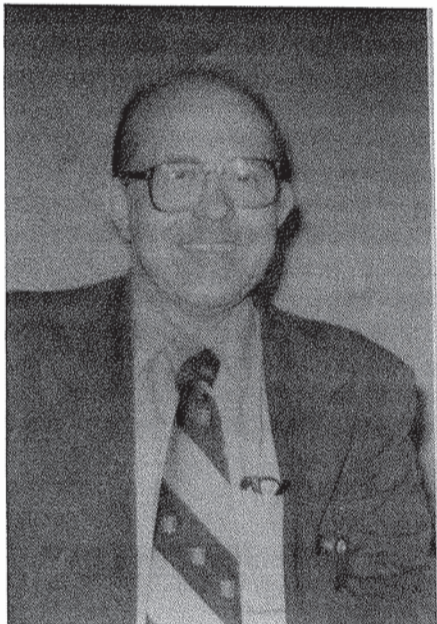
There are a few contests coming up that deserve mention. For the DXers that are looking for a new/rare one is the World Wide DX Contest sponsored by CQ magazine. The SSB weekend is the last in October while those who get their jollied from paddles will have to wait until the last weekend in November. Complete rules for the WWDX are in the October issue of CQ. While not a DX contest (*I would imagine the rest of the world stays off the air*), the ARRL Sweepstakes will be upon us again in November. Each year RARA manages to field a number of stations who contribute to the club aggregate score. If you plan on operating even a small part of SS and sending in your score for RARA, let me know so your call can be included on the list that needs to be submitted beforehand. The CW and SSB weekends for this one are the first and third in November respectively. See the October issue of QST (*page 96*) for more information. For both SS and the WWDX contest, K9LJN and myself will have available at the next club meeting a limited supply of log, summary and dupe sheets.

That is all for this month, especially since I ran out of material. See ya'll at the meeting.

73, Gene, AK9N

**P.S. THE OCTOBER MEETING OF EARS WILL BE SUNDAY THE 23RD, 7:00 P.M. W.A. WHITNEY TRAINING ROOM. ELECTION OF OFFICERS WILL BE HELD.**

RARA MEETING SEPTEMBER 9, 1983 • BOB W9QBH



# Local Hams To Have A Chance To Talk With Astronaut In Orbit...

For the first time ever, "average" citizens from locations all over the U.S. and the rest of the world will have a chance of talking directly with an astronaut in orbit when STS-9 lifts off from Cape Canaveral October 28 carrying the first Amateur Radio Station into orbit.

Dr. Owen Garriott, will use a hand-held radio during part of his off-duty time to communicate with some of the thousands of hams around the world. The call sign will be W5LFL.

All ham radio operations for STS-9 will be in the Amateur 2-meter band, with the primary frequency to be 145.55 MHz when Dr. Garriott is over the SS. Although only licensed amateurs are allowed to transmit signals, anyone with an interest can listen in. All that will be needed is a receiver (such as a scanner) capable of tuning to 145.55. As the Orbiter approaches the portion of the ground track where Amateur Radio Stations are possibly located, Dr. Garriott will call and listen on alternate minutes. He will transmit continuously for one minute, beginning on the even minutes, and will receive continuously for one minute, beginning on the odd minutes. During a typical even minute transmission period, Dr. Garriott will identify a geographical area that he will listen for. As time permits he will also describe crew activity or views of the earth.

During the odd minute receive period, Dr. Garriott will scan the announced receive frequencies for call signs from the designated area only. To establish contact send your full *call sign only*, repeating it several times during the scanning period.

During the next transmission, on the even minute, Dr. Garriott will acknowledge all call signs he has heard during the listening period. No other report will be needed; call sign identification constitutes a two-way contact. This procedure will give more operators a chance to make a contact. If time permits, some stations may be called on for short transmissions to fill in the time period.

Specially designed QSL cards will be available to anyone who sends a reception report of the Amateur Radio operation from the Space Shuttle *Columbia*. Non-amateurs can monitor on scanners to qualify for a special QSL. Send all reception and confirmed contact reports to ARRL, STS-9, 225 Main Street, Newington, CT. 06111, USA.

Dr. Garriott's transceiver will be a battery powered unit capable of 5 watts output. The antenna will be placed in the upper crew compartment window on the aft flight deck. He will wear the standard in flight headset when operating the radio.

Dr. Garriott says "*I look forward with great enthusiasm to brief conversations with as many of my fellow hams around the world as our work schedule permit.*"

Press Release supplied by Peter O'Dell, Public Information Coordinator, ARRL.



# Secretary's Log

RARA's first meeting since the summer recess was September 9, at the usual place. It was nice to see everyone again. Bob Berg was a visitor for the evening, and we hope to see him at many more meetings.

Gene, AK9N, told us about the novice class that is being held this fall. At the introductory session that was held only 7 people showed up, and by RARA time only 2 people had registered for the course. If you know of anyone that is interested, send them Gene's way.

Next month is the election of officers. Moe/N9CCE, Frank/KS9X, and Dale/KT9P are in charge of nominations. Anyone that's interested in running for an office can contact one of them.

Our program for the night was Robert Hajek, W9QBH, from the ARRL. He gave a very interesting talk about ARES and RACES.

*Thanks, Bob!*

Hope we see a lot more of you at the October meeting.

73's  
Kay/N9DRL

## **ATTENTION RARA MEMBERS • ATTENTION RARA MEMBERS**

Out at Rock Valley College there is a rather nice amateur station (*Collins, Henry, RTTY gear, Big TH-6, and other assorted goodies*) that has been sitting mostly idle for far too long. There was an attempt last spring to generate some interest in getting this station on the air more frequently, but without too much success. The powers that be at RVC look at the space the station occupies and can probably see many much more useful things to do with that room.

The future of the ham station at RVC rests in our hands. Which would YOU, RARA member, like to see happen? We can have a station out there or be able to admire the new storeroom. We are looking for people who are willing to give up one or two evenings each month to open the station for use. If you might be interested or have any ideas or suggestions call KS9X (397-6966) or AK9N (654-0675) or talk to either one at the next club meeting.

# Novice Corner

Hello to everyone from KA9LTR! I'm sorry that I didn't have a column for last month's *Ham Rag*, but due to my having to do some of the work in the construction of my new QTH, I just didn't get around to it. I hope to be moved in by the end of October and to have all my antennas up by then.

The topic that I would like to make mention of this month is the National Electrical Code and how it applies to ham radio stations, both for the safety of the radio operator and also others who might be near the ham's installation.

The code covers various aspects of the radio amateur's station, including antennas, grounding and interior installations. Antennas in particular are mentioned a great deal. According to the Code, the minimum size of wire for a transmitting antenna is No. 14 AWG for spans 150 or less and No. 10 AWG for lengths over 150 feet. This assumes the use of a hard-drawn copper wire. For copper-clad steel or other high strength materials, the sizes are No. 14 AWG and no. 12 AWG respectively.

Lead-in wires are to be at least as large as the antenna wire itself and the minimum clearance between the lead-in wires and the surface of the building should be at least 3 inches. If coax is used where the outer shielding is effectively grounded, then lead-in wire size and clearance rules do not apply.

Where lead-ins enter the building, unless coax is used, they should enter through a rigid, non-combustible, non-absorbent insulating bushing or tubing. Lead in wires that are not coax type should be installed so as to make accidental contact with them difficult.

Each conductor of a lead-in for outdoor antennas should be provided with an antenna discharge unit (*lightning arrestor*) or other suitable means that will drain static charges from the antenna system. This doesn't apply if the lead-in is coax, where the outer shield is permanently or effectively grounded or if the antenna is permanently or effectively grounded.

Ground wires between the lightning arrestor(s) and earth ground should be at least as large as the size of the lead-in wire but not less than No. 10 AWG copper, bronze or copper-clad steel. The equipment grounding conductor connecting the ham station to earth ground should be at least No. 14 AWG copper or equivalent.

Radio transmitters should be enclosed in a metal frame or case and all metallic outer parts should be effectively connected to ground. Also, all external metal handles and controls accessible to the operator should be effectively grounded. All access doors should be provided with an interlock switch that will disconnect any voltages over 350 volts when any access door is opened.

By following these simple procedures, one can have a safe antenna and radio station installation.

**73's, Brad**

# Potpourri

Here we are in early October. I guess there is no use stopping the clock. Father time just keeps rolling along. We can put our fans away now until next year and go back to heating our homes instead of running air conditioners. It was a hot dry summer but some people seem to like 90 degree temperatures. I for one like all four season. It would be monotonous if it was approx. the same temperature day after day after day. Every one to his likes and dislikes. 'nuff sed.

Many area hams met on Saturday mornings at 9:00 AM in Roscoe for breakfast. The place is the Silver Dollar restaurant located at the intersections of highway 251 and Elevator Road. Attendance seems to grow each Saturday and every one agrees it is a nice place to gather and enjoy breakfast together. Try it out and form your own opinion.

KB9WD and KA9NDQ, Dale and Jo Ann Landis are spending some time (*vacationing*???) at Niagara Falls, New York. Do you suppose their trip there is a second honeymoon?? I'd say that would be a sure way to stay young!

N9BZT, Nancy Mather has returned home from a brief stay in the hospital. We are all happy to know they didn't keep her there very long. Dale, please start being nice to her.

K9UWO, Frank Reiter, passed away in mid September. A true ham and well liked. We will all miss Frank and extend sympathy to his close friends and family. SK.

73, N9CCH, Chuck

## K9UWO/SK

Frank N. Reiter, K9UWO died at 7 P.M. Sunday, September 11, 1983 in Rockford Memorial Hospital after a long illness. He was born June 6th, 1908 in Mendota. He lived 28 years in Rockford moving here from Sterling. He married his wife Dorothy in Chicago, January 18, 1947. He retired in 1976 from Pella Products where he was employed as a salesman. He was a member of Dixon Masonic Lodge, Friendship No. 7, A.F. and A.M.; Scottish Rite Bodies, Valley of Freeport; Scottish Rite Chorus; Tebala Shrine Temple; and Tebala Drum and Bugle Corps; and the Rockford Amateur Radio Association. Services were held at 11 AM Wednesday, September 14 with graveside services at 1 p.m. in Riverside Cemetery, Sterling.

---

**ROCKFORD AMATEUR RADIO ASSOCIATION, INC.**  
**P.O. BOX 1744, ROCKFORD, ILLINOIS 61110**

---

OFFICERS		1983	DIRECTORS			
President	Bob Davidson	WA9NTT	877-6274	Frank Hirsch	KS9XH	397-6966
V. Pres.	Chuck Henley	N9CCH	633-6524	Jim Ambruoso	WD9FVF	654-3620
Sec'y	Kay Becker	N9DRL	397-3169	Maurice Bolte	N9CCE	877-5439
Treasurer	Brad Ambro	KA9LTR	398-1648	Dale Mather	KT9P	399-2002
<b>HAM RAG Editor</b>						
	Sharon Harlan	WB9SFT	398-2683			
<b>Circulation Manager</b>						
	Alice Davidson		877-6274			

# Ham Mart

**FOR SALE:** Collins general coverage receiver, \$85;

Collins 755-3B Receiver, \$325;

Collins 325-3B Transmitter, \$300;

Collins Wattmeter, 202-C3, \$40;

Collins Desk Mike, SM-3, \$50

TR7730 with Mike, \$200;

FT107 M Yeasu Xcvr., \$700;

FT107E Ext. PS, \$100;

This is some of W9TAG's equipment. Call N9CCH, Chuck to see this or any other misc. pieces. **633-6524.**

**FOR SALE:** Model 15 teletype - excellent condition - \$60.

64Kx1 Dynamic Rams-8 IC's- \$45

(with wirewrap board s100-interface chips- delay line \$70.

Call Gene, WB9MMM at **398-2683**

**ROCKFORD AMATEUR RADIO ASSOCIATION  
P.O. BOX 1744 ROCKFORD, ILLINOIS 61110**

ADDRESS CORRECTION REQUESTED

BULK RATE  
U. S. POSTAGE

**PAID**

ROCKFORD, IL  
Permit No. 230

## **NETS:**

**28.7 Mhz. Monday 9:00 p.m.**

**50.4 Mhz. Nightly 9:00 p.m.**

**146.01/.61 Mhz. Monday 8:00 p.m.**

**BLACK HAWK VALLEY  
TEN TEN INTERNATIONAL**

**28.925 Mhz. Wednesday 9:00 p.m.**

**21.130 Mhz. Thursday 9:00 p.m.**