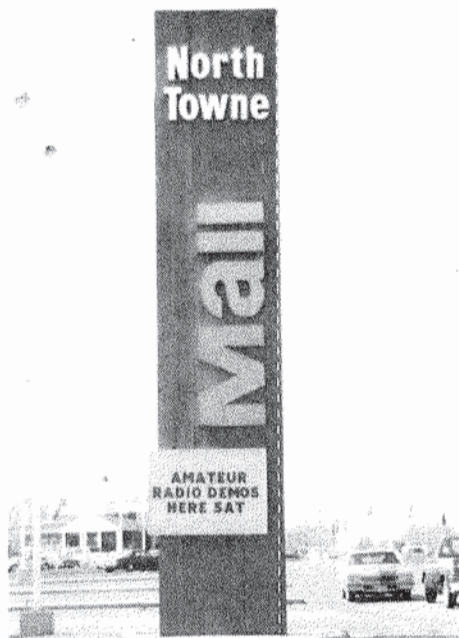


Ham Rag

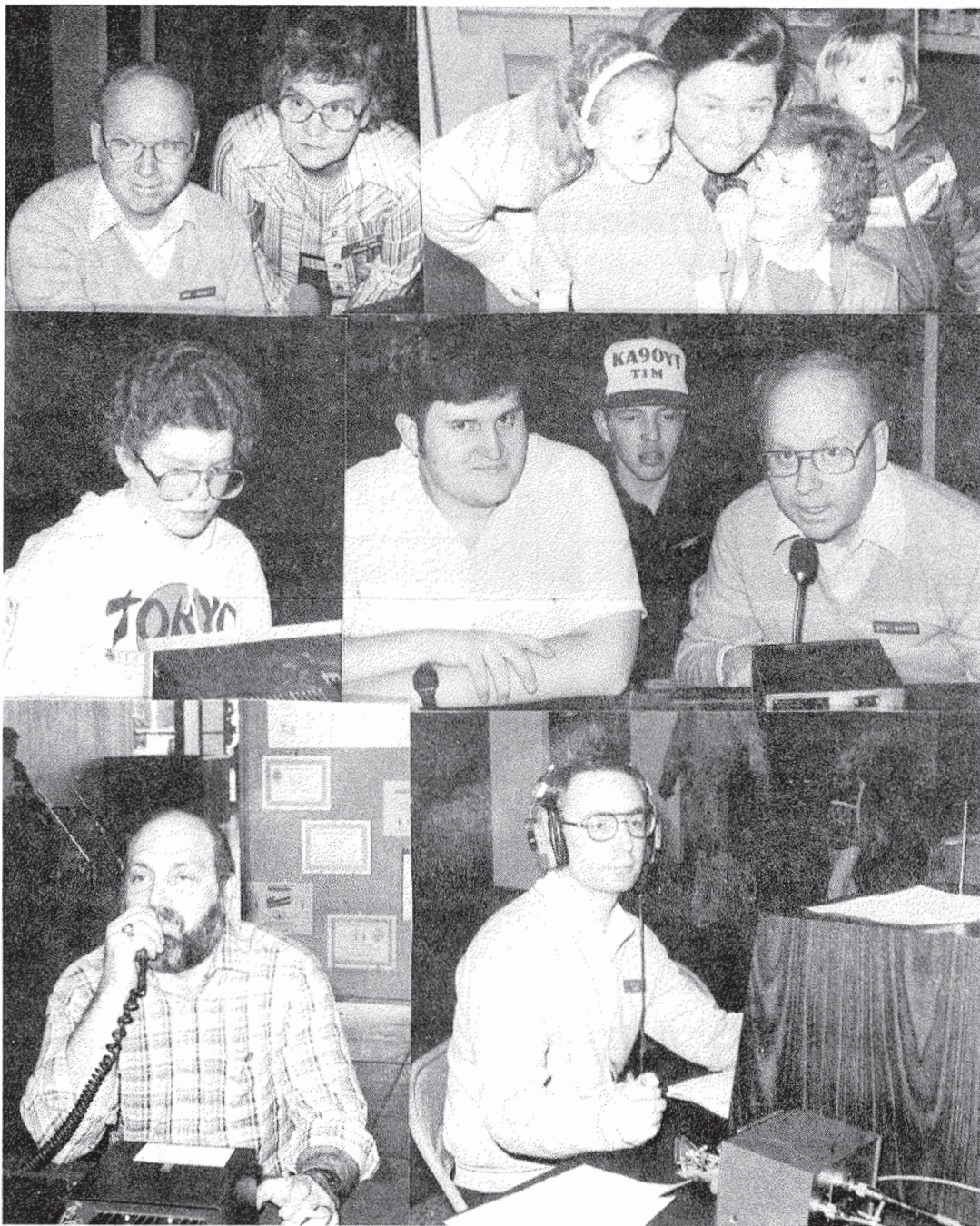
Rockford Amateur Radio Association

May, 1984



R.A.R.A. Meeting
May 11, 1984
R.V.C. Building 1, Room 222
7:00 P.M.

AWARENESS DAY MARCH 31, 1984



Secretary's Log

Bob, WA9NTT, opened the RARA meeting shortly after 7 amidst the usual chatter of everyone in the room. That new gavel sure comes in handy!

Bob reported that Awareness Day was a success. Thanks to all who helped. We were fortunate to have such great weather! I sent out 55 QSL cards from a total of 58 contacts. That's 30 more than last year. Hope we receive a lot of responses! If you receive a card, please QSL. (*A certain person south of here, take note!*)

Gene, WB9MMM, put his programs on the board that had been omitted from last month's "Ham Rag". When certain variables were taken out, the messages read "April Fool" and "Good Luck".

Gary, K9LJN, sent sheets around to sign up for Field Day teams. People are needed to 80, 10 & 15, and 2 & 6. If you can help, contact either Gary, Gene, K9IKP, or the team captain. Team captains were listed in last month's issue. Please Help!

Mike Christiansen from the March of Dimes talked to us about the walkathon scheduled for Mary 5. This is their largest fund raiser. 12 - 15 people at least are needed. If you can help, it would be appreciated. Shari, WB9SFT, is in charge of it.

There is also a walkathon for Cerebral Palsy on April 28. Paul, KR9P, is in charge of that. RARA sure is going to be busy!

Russ, WD9FVI, told everyone that he and his family are moving to Bloomington at the end of this month. He thanked everyone in the club for all the good time he's had. Russ is going to be missed by all. Good luck to you Russ!

Larry, KS9B, and Gene, K9IKP presented a program on "Taking the Mystery Out of Dx". They showed a video tape of some local Dxers. It was interesting to see the different ham shacks and antenna systems. Very impressive! There were several DXers present at the meeting; so Larry and Gene got some help from the group once in a while.

By the way, greetings to Jeanne Luse, KA9QZV, and Fernando Cabrera. Jeanne is a graduate of the last novice class and has upgraded to tech. Fernando is a member of the present novice class. Good luck to both of you! It was nice to see you at the meeting. Come again!

Hope to see all of you at the next meeting in May.

73, Kay, N9DRL

Ken Farver, KB9I, will give our May program on HF receiver testing. He will define common terms such as noise floor, third order intermodulation distortion, phase noise, and third order interrupt point. Ken will bring his own equipment so club members can bring in their radios to be tested. Ken would especially like to test a Yaesu FT 7576X. A lot of popular radios have already been tested by Ken and he will have the results available that evening. Please bring along your rigs and power supplies to be tested.

Tech Topics

170et's face it. The deadline has caught up with me. I knew I would forget something while I was out of town twice last week and the revelation has come too late. What we have here is an opportunity for a potpourri of technical tidbits. Toput it another way, here's a bunkh of short subjects that don't require a lot of thought.

Attaching PL-259 plugs to coax strip the cable as no'mal, but where the outer insulation comes to an end, reduce the sizh so it is narrower at the end. This forms a "ramp" that you can hold the shield back over on, and then screw the plug onto. A solderless connection is formed, and according to a crusty German sargent that worked for me in the Army, this will work better than most of the connections we solder on the cables. He had used this method for AM, SSB, RTTY transmissions lines of various power requirements. So have I, without problems over the last ten years or so. I must say I never have been able to solder these shield connections well enough to be really happy about them.

Proper serving of guy wire ends that's the part where the wire stops and you are supposed to wrap each little strand around the guy wire, one at a time. First, most of us on't do it. Second, it should be done because it acts as a safety restraint if the clamps loosen. Also, all sharp ends geu put where they can't hurt anyone. The Rshn tool is too expensive to use just for this, especially when Vicegrips (TM) were made for this job. Just grab the end of each strand in turn, and wind it merrily around the guy wire and the free strands. When you get to the end this gets unwieldy, so just open the Vicegrips and crimp the end of the wire a bit at a time to force it around the last corner. A professional job!

Tower leveling can be a veritable pain if done with a level. Don't forget the almighty plumb bob, which is configured soetimes as a wrence and a piece of string. Clamp a board at the top of the tower section (or start with two sections) placed so a string tied to it goes down the center of the tower. A similar board clamped toward the bottom of the tower in the same relationship to the tower legs will have the string right up against it's edge when the tower is level. If you mark where the string should hit and notch the board, a simple indicator appears. Note that the farther apart the boards are, the smaller are the effects of putting the string and the notch in dissimilar places. Tie the tower bottom sections in place, adjust the string so the string is in the notch center, pour the concrete, and make the final adjustments.

Soldering those little repairs, or the new parts with the tiny legs. The soldering iron cord is always in the way, and the parts died on the way into the circuit. This could be due to the oversize, ungrounded AC soldering iron. Suggestion, use a smaller soldering iron. You won't overheat the connection (which i bad for the solder and the circuit boardboard and the components), and if you you use a rechargeable iron the nasty cord won't be in the way. If you ground yourself, static won't destroy the part while you solder (this is another discussion in itself). For repairs, to unsolder components, get some Solderwick at J&M or Midwest Associates. This stuff helps to remove the old solder to allow removal of the component. Power vacuum desoldering equipment is nice, but Solderwich is affordable. Don't buy too much, the real old stuff doesn't seem to work as well. If you are willing to shell out a few dollars, he spring operated manual solder suckers are a nice compromise.

Model rockets they really don't belong near strong radio frequency fields. If too close to transmitting antenna or inside a microwave oven ignition will occur, resulting in undesirable smoke and noise.

Meet Dale, KB9WD, & JoANN, KA9DNQ

This month's "Ham Rag" assignment was very easy and very enjoyable. It all started with an invitation from JoAnn and Dale for dinner on a Saturday night. What could be easier? So I took my trusty camera with me and got all my pictures. Besides that, the roast pork and dressing was out of this world. JoAnn can sure cook!!!

Dales's amateur career really started in 1972 with CB radio. His handle was Big D. Wanting something better, Dale got his novice ticket in 1977 and held the call WD9DBD. One must upgrade, and in March of 1981, Dale received the advance call of KB9WD.

JoAnn could not be left out of all the action; so in 1979 she earned the call KA9DNQ, novice class.

In 1979, JoAnn was appointed by the RARA president, Shari, WB9SFT, to fill the unexpired term term of secretary of RARA. JoAnn was elected to that post for the 1980-81 term. I am told that she did an excellent job.

Dale has been making up the labels for the "Ham Rag" on his computer for about 4 years now. Dale showed me how he can change information such as addresses and call signs for the labels. He can do this **only** if he has the information. He can make your name disappear from the "ham Rag" mailing list too. So if you son't pay your dues, Dale does he magic trick - you're off the "Rag" mailing list.

One of the outstanding contributions Dale and JoAnn make to the RARA club is preparing and cooking the pig that ends up as RARA 'roast Pig Picnic'. 1984 will mark the 5th year that they have taken care of the "main course" for the picnic. I just know that the YLs would love the recipe for the roast pig so they can serve it to the OM. So, here it is!

ROAST PIG

- 1) 200 pound pig (dressed to roast), sex makes no difference.
- 2) Remove head (optional)
- 3) Stuff with dressing
- 4) Roast for 14 hours at 300°.

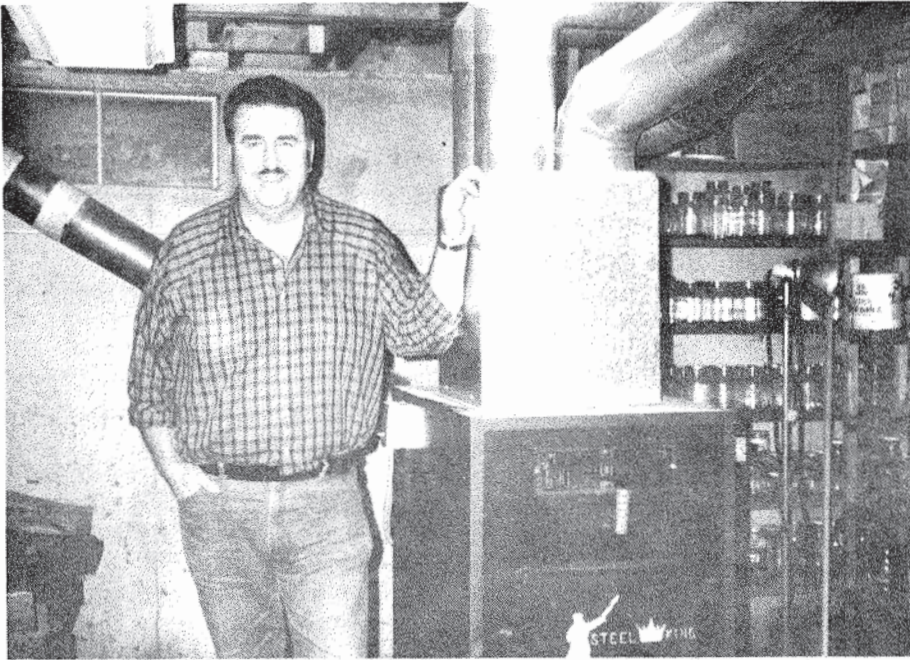
Dressing for Pig Roast

- 12 loaves of bread
- 5 pounds of onions
- 3 bunches of celery (cut up)
- 12 eggs (without shells)

Mix all the above with 2 gallons of water and add salt and pepper to taste. Put in sage if that's what you like. Dale and JoAnn put the dressing in plastic cooking bags so the dressing stays inside while roasting.

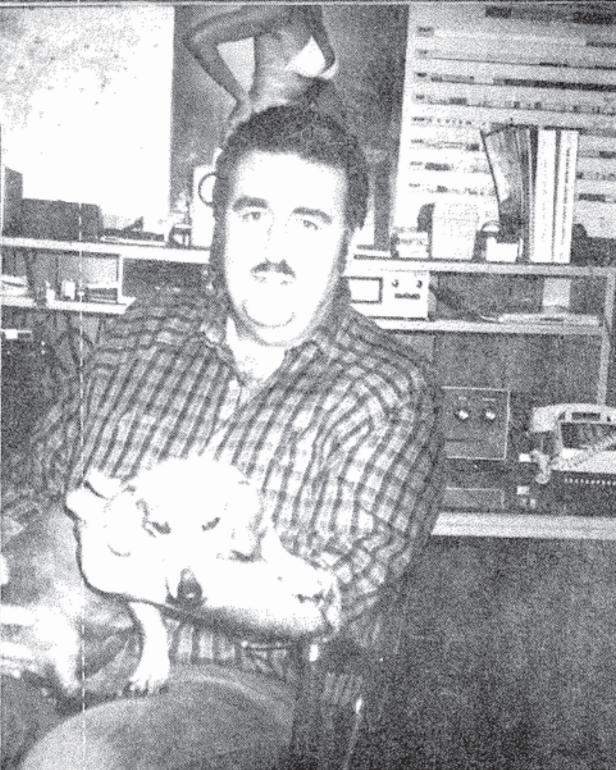
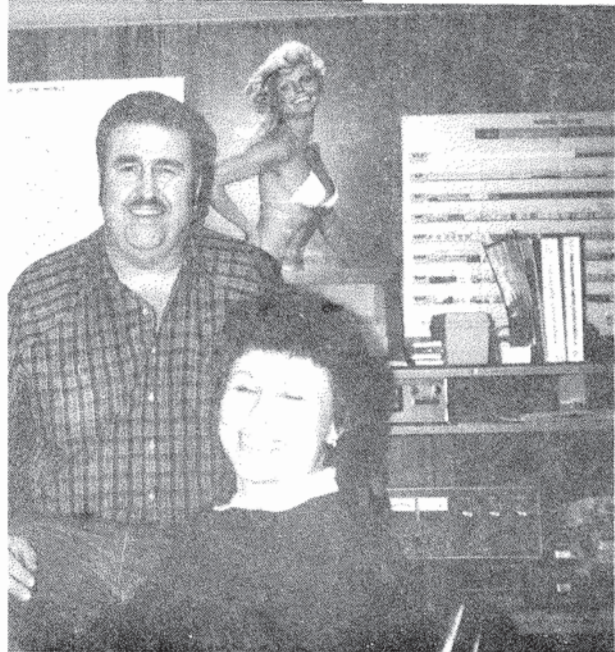
Dale's ham shack is equipped with a Kenwood TS820S and a Yaesu 2100B 1 KW amp. A Kenwood 7400 is used on 2 meters. His computer is a Radio Shack TRS-80 with an Epson MX80 printer.

Dale also has a Cushcraft ATB-34 tri-bander up on a tower. Dale likes to rag chew the most with a little DX throw in for flavor.



Photos and Layout by Marvin, KC9WF





Micro/Digital Corner

This month I would like to share an article that appeared in "EDN" magazine March 8, 1984. EDN has a section every month called "Design Ideas" that presents simple circuits, however it's usually something that I probably wouldn't have thought to do that way.

I've been thinking that it would be neat to be able to copy slow scan with my Vic 20 (or any small computer) and display the picture on a regular TV. I was able to think of ideas on how to convert the slow scan and put it into memory but my hangup was converting it back to a picture. If I was dealing just with white and black with one shade of gray I wouldn't have had too much trouble since most computers have this type of capability. But since slow scan consists of photos being sent, more gray shades are needed.

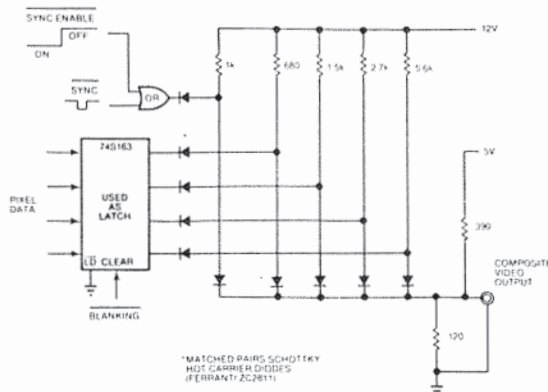
The circuit shown below is a very easy way to handle the problem. Using one 8 bit memory location you can have two pixels of picture information. The advantages of this circuit (according to the article) are:

1. TTL inputs.
2. Selectable sync.
3. 20 nsec max full scale setting.
4. 75 ohm output impedance.
5. Standard video dynamic range.
6. Lower power consumption.

The 74S163 serves as a synchronous latch that resynchronizes incoming pixel data. The high speed hot carrier diodes switch currents from the top-row resistors through either the latch's output stage or through the load to OV. The 5V through the 390 ohm resistor provides reliable diode switching.

I don't know if this type of circuit appeals to anyone else. I hope it gets someone else thinking about how they can use it. If anyone is interested further, I will get them a copy of the article. This original circuit was designed by D. J. Fivian, Berkshire, England.

73, Gene



An extremely simple but effective composite-video generator, the circuit shown provides a 1.43V p.p composite video/sync signal that settles in approximately 9 nsec. It accepts 4-bit (16-level) TTL pixel data and TTL-level sync signals and delivers a 75Ω output signal for directly driving TV cables.

Q Z G M N C R E H D Q W O V I C E U W P
 R M C A I U Q W G E N E R A L U G B I A
 B I V N S S W H B I A D V A N C E D P O
 W C C N C C M R S P Z F K Q S E T X Q F
 P R Z E F E E D L I N E X X I E I R I S
 P O M T I M J Q H I G B I Q C G M E I I
 C P U N S N U X P I P Z G H Z O B I P A
 P H P A T M X B N T E F N Y I G I F U T
 Q O R R O U U M I K O I H T Y M K I Z I
 T N E Z P R O K V L C W H U T G J L L U
 S E V A S U W U H I E G E T J V G P N N
 E B I N N R V N H U O K F F E C M Y J
 T A E V U J Y N Q P E V K B C W U A H S
 N R C L S D N Y O Y C A L L S I G M K M
 O T S K V N H R E C R O T A R E P O B I
 C X N D G P P R R A C S O Z X H R B M H
 T E A P D W M R A C S O Z X H R B M H
 N T R A Q B T Q P H O L Q S B I B G U R
 N J T Y P M T S C E T T T W I U N G
 G X T I W V Y V Z B G N J B W G W G F

STATION
 OPERATOR
 TRANSCEIVER
 CALLSIGN
 FEEDLINE
 ANTENNA
 TOWER
 AMPLIFIER
 KEYS
 MICROPHONE
 PROPAGATION
 SUNSPOTS
 NOVICE
 TECHNICIAN
 GENERAL
 ADVANCED
 EXTRA
 OSCAR
 CONTEST
 MOBILE

Novice Corner

Hello again to everyone from "*Little Toy Radio*". I sure hope that everyone is enjoying our nice spring like (?) weather, HI!

Now that summer is getting closer (*my water ski is all cleaned up and ready for use*), and with the economy still looking pretty good, one might be wondering what to do with some extra money that might be available for one's hobby.

Probably one of the first things that comes to mind for improving a ham station is the acquisition of a newer and more powerful transceiver or a linear amplifier if you hold a license higher than a novice (*or are going to upgrade shortly*). This brings to mind an old question - will that extra power REALLY help?

This question is practically as old as the hobby of Ham Radio itself. What brought this subject to my mind was when I hapened to come across an article in one of my old QST magazines - June, 1943. The name of the article was "*Watts or Decibels?*" and was written by McMurdo Silver, an early radio pioneer, inventor and manufacturer.

McMurdo came from the school that believed, and rightly so, that it wasn't important how many watts input (or output) was being used as was the effeciency of the antenna system. He gave some figures to back up his beliefs.

It was pointed out that when the power was doubled, this made the signal 3dB stronger - barely noticeable to most peoples' ears! Increasing the power three time resulted in a gain of 5 dB. This would make for a slightly more noticeable improvement at the other end. By increasing the power level ten time, one would relize a 10 dB gain. This gain would be very noticeable at the other end.

In review, increasing the transmitter power level two or three times, over what it presently happens to be, will not bring about nearly as noticeable of an improvement as a ten-fold increase.

By looking at these figures, it can be seem that a much more effective signal can be radiated by improving the antenna system, making sure it is as efficient as possible, instead of simply (and usually NOT inexpensively) increasing the transmitter power.

73, Brad, KA9LTR

Potpourri

Some of the local hams who have traveled south for a spell this year have returned home to take care of spring shores, etc. Frank Hirsch, KS9X, was one such snow bird. This time he took his Yaesu low band rig with him with a Hustler vertical on the rear bumper. He said it was a lot more fun than the 2 meter rig. This however brought a lot of "static" from the XYL. She got tired of all the Yak-y yak and wanted the car radio on at least part of the time. Chuck, N9CCH, was another one who took off for about three weeks, meeting several hams at luncheons and breakfasts. Incidentally, Fred, W9PGQ, will be back at his home in Wisconsin by the time the May issue is mailed out.

A round of applause is due for the best classes ever at the Harlem Community Center this spring. There are ten in the general class and twenty-one taking the novice course. We can look forward to hearing some new call signs in the near future and hopefully some new members in RARA.

Breakfast at the Rockford Plaza and the one at Roscoe seems to be gathering momentum. Usually a nice bunch show up at each place. The Roscoe group meet for breakfast each Saturday morning at approximately 9:00 at the Silver Dollar Restaurant and the Rockford Plaza bunch show up at the Tinker Bell restaurant every morning except Sunday at 9:00. Why not join them sometime and rub elbows with other hams. You might like it!

Various area events such as marathons, races, etc. will take place again this year and our club will again be offering our help with communications. It's nice to know that we can be of assistance and do something beside sit in the shack and call CQ CQ CQ.

I don't want to be reprimanded so guess I had better call it a day and the this in the mail. Our editor might want to delete much of this.

Remember Field Day is getting closer. It's June 23 and 24 so get involved and join in the fun. Contact either Gene, K9IKP, or Gary, K9LJN, if you can help set up equipment or help with operations.

NUFF SED 73, Chuck, N9CCH

A new callsign heard on the bands is NA9J belonging to Jack Cook, ex WD9DBC. Congratulations on the upgrade to extra, Jack!

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