



the **RARA RAG**

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NO. 5

Education Promise

Essie Calhoun Speaks on our Childrens' future Education

Kieth Freeberg, N2BEL

The future of our childrens' education will be addressed at our meeting on January 7, 2000. We will hear from Essie Calhoun of Greater Rochester's Promise, a participant in General Colin Powell's initiative, America's Promise. We are all concerned about educational standards and keeping them high not to mention keeping our area's children motivated and learning. Learn what this group is doing to promote educational and career initiatives with our children.

FAR Scholarships

Hugh Trumbul, W3ABC

THE FOUNDATION FOR AMATEUR RADIO, INC., a non-profit organization with headquarters in Washington, D.C., plans to administer seventy-three (73) scholarships for the academic year 2000-2001 to assist licensed Radio Amateurs. The Foundation, composed of over seventy-five local area Amateur Radio Clubs, fully funds ten of these scholarships with the income from grants and its annual Hamfest. The remaining sixty-three (63) are administered by the Foundation without cost to the various donors.

Licensed Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college or technical school. The awards range from \$500 to \$2500 with preference given in some cases to certain study programs.

Additional information and an application form may be requested by letter or QSL card, postmarked prior to April 30, 2000 from:

FAR Scholarships
Post Office Box 831
Riverdale, MD 20738

The Foundation is devoted to promoting the interests of Amateur Radio and its purposes.

Rochester Hamfest---Part I

Lloyd R. Caves, WB2EFU

There is just six months to go before the Rochester Hamfest/Atlantic Division Conference is upon us. This years Hamfest will be held on June 2, 3, and 4. Over the next few months this column will keep you informed as to what is taking place during that weekend and what the programs will be. The total program schedule will be in the May issue of the *Rag* showing the time and place of each so that you can schedule your time to take advantage of the programs that interest you. There is a lot to see when you attend this years Hamfest and you don't want to miss anything.

One of the main events of course is the manufacturers and exhibitors that will be in the Dome. This is the place you will be able to play with and get all the data and specifications on the equipment of your choice. After twisting the knobs on the equipment you will be able to make your purchase from one of the many vendors that will be there selling this equipment. The Dome will open to the public at 12:00 (noon) until 5:30 PM on Friday, 8:30 AM until 5:30 PM on Saturday, and 8:30 AM until 1:30 on Sunday.

The second main event is the Flea Market. This is one of the largest radio flea markets in the area and there will a lot of great deals on all kinds of items. You will want to be out there early to get the best deals. Remember, "The early bird gets the worm". The Flea Market will open at 6:00 AM on Friday morning and will remain open until the end

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RaRa Meeting

January 7, 2000

8:00 P.M.

Social Services Building

111 Westfall Road

Greater Rochester's Promise

Essie Calhoun

the **RaRa RAG**

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The Prez Says

Bob Moore, N2USB

By time you read this the great day of gift giving will have come and gone. I hope you received the new piece of amateur equipment you have been hinting for, or if you are like me, being more direct and asking for it (that way usually works the best). On the other hand, if you didn't receive that desired goodie, it is a great time to take advantage of all the after holiday sales to dispose of the remaining gift funds to acquire that much needed item you desire. The third way, which is the method I used, and the most assured way of obtaining what you want is to assist the XYL or OM by ordering it yourself. That's how I received the nice new three-band beam. Works every time. The explanation of need can always come later.

Just because the holidays have passed does not mean we can forget about giving. I feel sure our membership contains members who have expertise we are looking for that could benefit the club and its activities. For example, if you are or have experience in writing, publishing, advertising, or other related publishing skills, the *RaRa RAG* has a position for you and a need of your assistance. Our Editor and his staff do a terrific job of publishing the Rag every month but are in need of your help. If you could provide your expertise and help them for a couple of hours a month you would be making a great contribution to your club and help them to continue to produce the best amateur radio publication in New York state. I read a lot of club publications from across the country and none of the ones I review can even come close to the quality of the publication you receive. Come on out and join the team. It's a winning team and you will get a great deal of satisfaction by being a member.

See you at the January meeting.

DON'T FORGET RaRa SPRING PICNIC

SILENT KEY

HELLEN. BELLOR
W2ATX

November 22, 1999

Many thanks and kudos to Elaine, N2KXG, for stepping forward with the first article for the YL Forum – an entertaining account of her experiences with amateur radio.

As strange as it may sound, I became a Ham because I broke my elbow. Let me explain. Ten years ago, a hiking accident shattered almost every bone in my right arm. After extensive surgery, my arm was totally immobilized in a very heavy rigid cast. Needless to say, my life was not the same. Winter was setting in and I was looking to keep busy in my altered lifestyle.

Now would be a good time to study for my novice license....according to my husband Stan, KA2U. He was all too eager to help. The rest of the family were all Hams – William, WB2HDK, Murray, KB2NFR, and Paula, N2VGR and I was the hold-out. I thought learning theory would be hard because I had absolutely no scientific or electronic background. Having been a foreign language major, I figured I could learn another language (code) without a problem. But time was hanging heavy on my hands, so I decided to give it a try.

Well, the learning process turned out to be exactly the opposite from my expectations. My study skills and photographic memory for diagrams and formulas made it relatively easy to pass the theory portion. Unfortunately, my visual skills worked against me when it came to learning the auditory skill of Morse code. My tendency was to translate sounds into dots, dashes, and even pictures and then into letters. Dah, dah, di, dah became the wedding march and a picture of a Queen walking down the aisle before it became a Q. That system worked for short characters, but not for longer ones. Stan told me I had to cut out the visual and concentrate only on the sounds because there wasn't enough time for such a lengthy translation. Mastering code was one of the hardest things I ever did. But master it I did! Perfect copy for the test given to me by Dwight, K2KWK, and Mike, NO2Z. To say I was elated would be putting it mildly. The thrill of accomplishment was wonderful.

Over the years I did upgrade to Technician. I use my license to communicate with my husband when we are off hiking. My favorite memory was at the Grand Canyon. I had walked a couple of miles along the rim and called him to say I was on my way back. Well, the walls of the canyon served as a loudspeaker to the world. Everyone along the canyon stopped what he or she was doing to see what was happening. Was I embarrassed! However, it's very comforting to know I can stay connected to the world when I need to be. So I am glad that I made the effort to become an amateur radio operator.

January 1980: Although not normally thought of as antenna time, the January meeting was on antennas and towers by Bud Hippisley, K2KIR. Bud was a former WNY SCM and active in traffic handling. RaRa held an open house for the newly renovated K2JD club station on a Sunday afternoon. Attendance was brisk. The Annual Diner-Dance was scheduled for February 9th and tickets could be gotten from Len Gessin, WA2ZNC. Also announced was the start of the Spring Code and Theory class by Ed Holdsworth, N2EH. In a rare RaRa Hints column it was told to save your Polaroid SX-70 film packs as they contain 6-volt batteries useful around the shack. Chris Reich, WB2DYJ, of the U of R Radio Club (K2ZWI), announced a CW training net. Operating at 28.160 Mhz, the purpose is to give Novices and Techs some on-the-air code practice. Craig Stolze, WB2AQQ, wrote an article describing his newly upgraded repeater, WB2AQQ/R, (147.78/18). Located at 1900 feet in Bristol, the 45-watt machine can be contacted from Buffalo to Syracuse. Craig added a microprocessor controller while doing the upgrades. So many options were available that a user's guide was recommended which could be obtained from RRRRA secretary Gil Chapin, WB2UTI. Writing for the RDXA again was Rick Berg, WA2RLQ, who told readers that the premier Rochester DX club is actively seeking new members. From the Want Ads you could buy a H-P 608D signal generator from Gerry Vogt, WA2GCF.

YL Forum *continued*

In addition to hiking, I also run, cycle, canoe, weight lift and walk. I teach older people about an active lifestyle at RIT and young people at Strong Museum. I figure when I have to slow down, amateur radio will become a more important part of my life. By the way, I forgot to mention that I was 58 years old when I entered the amateur radio world. Whoever said you can't teach an old dog new tricks? NOT SO. TRY IT— Elaine Zack, N2KXG

[Sometimes all we need is a little nudge to get us to do the right thing. A broken elbow is a pretty big nudge, though, Elaine. – J.S.]

OK, folks, Elaine has broken the ice by writing a great first article for the YL Forum. Let's hear what have been your experiences with amateur radio? What was the nudge you needed to get started? What are your favorite areas of the hobby? I'm at jstonehi@frontiernet.net. If you don't like to write, call me at (716) 582-2074. We want to hear from you, however you prefer to communicate with your fellow YLs.

DX Happenings

Ed Gable K2MP

Sad news starts this month's DX column as we report the death of Chod Harris, WB2CHO/VP2ML, from a heart attack. Chod will be remembered as an ARRL HQ Staff person where he headed the training department, was a DX news contributor, and later as DX Editor for CQ Magazine. Locals will remember Chod as an ex-Rochester resident when he obtained his WB2 call in the 60's.

DX'ing often takes a back seat during the Fall period when DX'ers turn to contesting. The just finished 160 meter phone weekend saw good activity on Saturday night with good DX available. Sunday brought poor conditions to the west and many a west coast multiplier was wanting in the log.

While writing this the ten meter contest is in it's last few hours. Tons of CQ'ers with few takers seems to indicate a downside in activity.

On the bands we find those pesky VP8 calls confusing again. Semi-rare South Shetland Islands (VP8) is active, only signing LZ0A. Good time to catch this one and QSL to LZ1KDP. Cambodia filled many a log with the super active single operator, Andy, XU7AAV. Andy went QRT on December 5th and you can QSL his home call, G4ZVJ.

January, 2000, will bring several fun calls for those collecting weird QSL's. Look for ER2000A, TO2000, VR2K, VC2K, K2K and probably many other millenium callsigns out there. QSL per operators instructions.

N2OO reports his just completed Spratly Island operation, 9M6OO, netted 21,000 QSO's. Sadly, sorta rare Crozet (FT/W) has gone QRT as Gilles, FT5WH, left for other pastures on December 7th.

The next meeting of the *Rochester DX Association* is January 18th, 7:30 p.m., at the usual 111 Westfall Road site. The meeting will be on Hints and Kinks for the DX'er. There will also be a VE testing session starting at 6:00 p.m.

Anyone interested in DX'ing or contesting can obtain a new Rochester DX Association brochure by contacting Ed Gable, K2MP, at 392-3088 or k2mp@eznet.net.

Gift Ideas-

Dine-A-Mate Books

John Woika- 716 223-2133

Ron McDonald Cookbook

Norm Turner- 716 254-0137

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**NEXT RAG DEADLINE
JANUARY 12, 2000**

RVHF Group

Tim Stoffel, NS9E

JAN UARY IS CONTEST MONTH — for the Rochester VHF Group!!

Lets see here...January meeting topic...proper biasing of input diodes? NO...Reducing cross-mode coupling in circular wave-guide? NO...calculus for the VHF operator? No!...Contest? CONTEST!! CONTEST!! CONTEST!! Yes, it's that time of year again. VHFers all over the area are tuning up their stations for THE BIG ONE, the January VHF Contest!

As always, we are looking for your contacts on January 22 and 23 during the January VHF sweepstakes. Contest starts at 2 PM on Saturday and runs until 11 PM Sunday. Rules can be found in QST or on the ARRL Website (www.arrl.org).

As usual, we are offering the Rochester Cup award to the local club whose members work the most Rochester VHF Group members during the contest. Look for updated rules and entry forms at either the Rochester VHF Group website (<http://vhfgroup.rochesterny.org>) or at the NS9E VHF contesting website (www.lionlmb.org/vhftest.html). This competition, long dominated by the Xerox ARC, has started to heat up in recent years!

We will also be offering an award to the highest FM-only single-op score in the area. You don't need to be a member of the Rochester VHF Group to collect this coveted award! Learn more at the above websites.

Do you REALLY want to get contest fever?? Then plan on attending the January Rochester VHF Group meeting! It will be held on Friday, January 14th at the Monroe Social Services Building, 111 Westfall Rd. in Rochester. Start time is 7:30 PM. IMPORTANT NOTE: This meeting is not for the faint-of-heart. If you don't want to leave the meeting as a CONTEST MANIAC, don't plan on attending!

For membership information, contact Jeff Luce, KB2VGH at vhf@vhfgroup.rochesterny.org (note new address!), or visit the club's website at: <http://vhfgroup.rochesterny.org>, or by mail at: Rochester VHF Group, P.O. Box 92122, Rochester, N Y, 14692.

ROCHSTER HAMFEST
JUNE 2, 3, & 4

RaRa HOTLINE
716 442-0587
24 HOURS A DAY

Amateur Television-Part 2

Profiling a Point to Point Radio Link

Bill McDonnell, KG2F

Well a month certainly goes by fast or so it seems. Last month we started with an introduction to profiling a point-to-point radio link, introduced Amateur Fast Scan Television, and compared it to Slow Scan Television (SSTV). To get started this month we will examine the Decibel and it's use in analyzing a radio link.

Many factors must be considered in engineering a radio or a television link. First and foremost, we need to know the area we wish to cover. Then plot the point-to-point radio path on a topographical map. Using this map, we can accurately determine the distance between our two stations. From this information Path Loss in decibels (db) can be determined.

As explained in last month issue, for FSTV operation, we primarily use directional antennas to improve the signal to noise ratio. In plain language we want as snow free a picture as possible. Remember the television signal occupies a relatively large percentage of bandwidth, when compared to our other narrow band modes like SSB or narrow band FM. Because of the wider bandwidth a higher signal to noise ratio is required for satisfactory reception. A good analogy would be to compare DX operation using CW Vs SSB operation. The smart CW operator will make use of narrow IF filters in his or her receiver. The narrower the bandwidth, the less noise is introduced, thereby improving the signal to noise ratio.

Two concepts we will be examining, in this series of articles, were briefly introduced in the last two (2) paragraphs. Each of these concepts, Path Loss and Signal to Noise ratio, make use of the decibel. In the second paragraph, reference to "signal to noise ratio" was made several times. It's a very important concept to grasp when engineering a communications link. The term "signal to noise ratio" is a measurement of how well we are receiving a signal. To express signal to noise ratio, we use a measurement unit called the "**decibel**". The decibel is a unit of measurement expressed as a ratio. It is a logarithm with a base of 10. Let's further explore this concept.

Consider determining the gain of a power amplifier. We can think of the amplifier as a black box, having input and an output. Let's say the input power is 1 watt, and the output power is 2 watts (Power is normally expressed in watts). To calculate gain, expressed as a decibel, we would use the following formula:

Note Ed: A scientific calculator or a log table will make calculating the base 10 logarithm a piece of cake.

$$\text{Gain (dB)} = 10 \log (\text{output power/input power})$$

Let's plug in the numbers and see what the answer is.

$$\begin{aligned} \text{Gain (dB)} &= 10 \log (2/1) \\ &= 10 \log 2 = 10(0.301) = 3.01 \text{ dB} \end{aligned}$$

You may have heard, "every time we double our power it's a 3dB increase in gain". Now you can appreciate the mathematical proof behind the concept.

Let's analyze another black box, but instead of looking at power gain, the input/output is now expressed as voltage gain. It's easy; just substitute the following formula:

$$\text{Gain (dB)} = 20 \log (V \text{ out}/V \text{ in})$$

Likewise, if our black box input and output were expressed as current, we would just substitute current (I), in place of the voltages. One important point to remember when working with voltage or current is the circuit impedance must be the same. Loss as well as gain can be expressed as a decibel.

Up to this point our discussion of the decibel has been in relative terms. We cannot say the output of an amplifier is 10 dB. That would be pretty meaningless. We can say however, our amplifier has a gain of 10dB. By using the formula for power we can solve for the unknown. In this case the power output would be 100 watts.

In performing our calculations we will work with absolute decibel units. One such unit is the **dBm**. This unit is power referenced to the milliwatt. Another unit encountered often is **dBw**. This is a decibel referenced to the watt. The unit used to express antenna gain is **dBi**. This decibel is referenced to an isotropic source, a theoretical perfect radiator. Another antenna gain unit is the **dBd**, or a decibel referenced to a dipole antenna.

In performing our system analysis of NQ20's station we will express various gains and losses in decibels. Things like Path Loss, Antenna gains, Transmission line losses etc. will be examined. Each of these circuit blocks will be expressed as pluses and minuses. We will be adding and subtracting the gains and losses along the way. An important point to remember when working with absolute units like the dBm, is when we combine, or add these units; we are actually multiplying power ratios. Lets look at another example.

Lets look at adding the outputs of two power amplifiers with a combiner. The first amplifier output is +30dBm, and the second amplifier is also +30dBm. To arrive at the correct answer we want to convert the absolute units back to numeric values. First dividing 30 dBm by 10 and then taking the

continued page 6

RRRA

Tom English, N2YJY

The RRRA will have had their annual family night out at a local eatery by the time this gets to your door. We expect all will have had a good time.

Next up for the RRRA will be Joe Doyle, Monroe County Director of Public Safety. The planned presentation will be the update of the Monroe County Fire Radio system. As always we meet the third Friday of the month at the Pittsford Town hall. We expect a good turnout for Mr. Doyle.

Looking ahead a bit, February is a tentative tour of WXXI. I say a tentative tour because the details are being worked out with Tim Stoffel NS9E. This is a rain check from last year when Tim had to back out due to work conflicts. Stay tuned for the latest details.

March is our annual auction at the Fire/Police Training Academy (tentatively). The site is subject to review by the City Fire Department and Lenny WA2ZNC is on the case. So save up your items to sell at the auction on March 17, 2000.

That's about it for this month. Don't forget everyone is welcome to come to our meetings. We meet at the Pittsford Town Hall on South Main St. in the Village of Pittsford (Basement meeting room).

We at the RRRA wish you all a very happy new year and look forward to seeing many of you at future meetings.

Amateur Television *-continued*

anti-log we can accomplish this. Remember this unit is referenced to the milliwatt or .001 watts. When the number crunching is finished we end up with a power expressed in milliwatts. In this case 1000 milliwatts, or 1 watt. Now add both inputs in watts together and convert back into dbm.

$$1 \text{ watt} + 1 \text{ watt} = 2 \text{ watts}$$

Now convert into dBm:

$$X \text{ dBm} = 10 \log (2/.001) = 10 \log 2000 =$$

$$10 (3.301) \quad X = 33.01 \text{ dBm}$$

If gains and losses are expressed in relative units (decibels or dB) the values can be just added or subtracted. Fortunately most of our analysis will be made in relative terms.

Well I hope everyone is with me so far. I cannot stress enough the importance of understanding the use of the decibel. For the remainder of the article we will be working exclusively with the dB. The use of a scientific calculator will speed our calculations along! One can be found supplied with Windows 95 or 98. We all have computers right and Microsoft is now a monopoly, isn't it? (Bill Gates crying all the way to the bank now... ahhh) Next we will start our analysis of Walt's system. Take care, and see you next month.

RaRa Amateur Radio License Testing

**Novice - Tech - Tech Plus
General - Advanced - Extra**

or

**Whatever Elements you need
to complete a license class.**

Saturday January 15, 2000

Registration - 8:30AM

Testing - 9:00AM

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RagChew

Lloyd R. Caves, WB2EFU

Did everyone enjoy the holidays? With a little luck everyone is reading this with your lights and heat on and still have running water. At this writing it is too early to tell what happened at the strike of Midnight on December 31st but lets hope there were no Y2K problems you had to contend with.

There is one thing the New Year should have in store for us that we will all like, and that is good band openings. The eleven-year sun spot cycle is now in upper half of its cycle and this is keeping the bands open. This should make it easier to contact all the DX that you are chasing. Just listen on 10 meters and you will find almost any country you want. Not only can you find them out there, even in the early evening, but also you can work them with just a few watts. People are working all over the world with 100 watts or less. Even the QRP folks are making their QSO's on 5 watts or less. It is good to see the bands in such good shape.

The FCC has also been doing their part in cleaning up the bands. This is also making it more enjoyable to be operating on them. Riley Hollingsworth and his staff deserve a big cheer for all their efforts. Keep up the good work as we can see the difference. Everyone's attitude seems to be better just knowing you are out there doing your thing.

It is hard to believe the New Year brought with it the half way mark for the clubs season. There are only five months and meetings left this year. However, lets make that the only down side of the year 2000. Of course the warmer weather will bring with it a lot of other ham related ventures for us to enjoy. Hamfests are one way to enjoy your time and get together with friends. Field Day is another. With today's modern rigs you can make every weekend a Field Day weekend Take equipment with you on trips, campouts and have yourself a ball. The rest of us will be in our shacks waiting to talk to you.

Happy New Year and best wishes to everyone!!

RaRa Rag Articles, and Submission Guidelines

The Rag welcomes and encourages the submission of articles for publication. Articles can be of any nature relating to ham radio activities, equipment, procedures, interesting or amusing stories, a how to build it, a how to do it, your latest "Great Antenna," or whatever.

When submitting articles to the Rag, it is best to follow a few simple rules. This will make life much easier for the editorial staff, and will expedite the inclusion of your article in the Rag.

Rag articles can be submitted up to the Wednesday following the regular meeting. It is probably best not to submit an article more than 30 days prior to the deadline date for the issue you want your article to appear, however if such is the case, attach some indication as to when the article is to appear.

Submission can take several forms, of which hand written is the least desirable. Articles can be submitted as a typed sheet, by fax, on an IBM/PC compatible disk or by E-mail over the internet.

If you are typing an article on paper, please don't use small type, 10-12 pt is fine. Make sure the print is not too light, and don't double space between lines. If you are sending an article by disk or modem, and your processor will let you, only hit the carriage return at the end of a paragraph. It is best not to indent the first word of a paragraph.

Photographs can be submitted if they are of good quality and are compatible with the media process. Photos with extreme contrast or unusually flat (no contrast) will not reproduce well. It is also a must the prints be on a smooth or glossy finish paper and not on a texture, such as a silk or portrait paper used primarily for viewing. If the photo contains more image than is desired, it is best not to cut the print. If such is the case, it is better to indicate the desired area on an overlay tissue, a mask cut from a piece of paper, or indicate with a marker of some sort in the white borders only of the print. A neat trick is to cut two "L's" from a piece of paper, slide them around until the desired area is "framed" and then taping them to the print with MASKING tape which can later be removed without damage to the print.

If the desired area of the photo becomes too small and has to be increased considerably, it is best to get an enlargement made from the negative of just the desired area.

You can E-mail an article over the internet at the address- aa2fo@rpa.net. If you wish to fax an article by phone, please call 716 334-4488 to arrange transfer at a convenient time. Photographs will have to be hard copy.

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Fall 1999 License Class Wrap Up

Tim Magee, WB2KAO

Congratulations to all the fall semester new licensees and upgrades. All of you are to be commended on putting forth the effort to earn your callsign or upgrade. Enjoy your new privileges in this great hobby. Unlike the Internet and some other radio services that thrive on anonymity, you can be proud of your callsign and your name because you learned the material and demonstrated your newly acquired expertise by passing the exams. I will be pleased to work you on the air.

Spring class registration will be held on Monday February 14th, 7 PM at 111 Westfall in the auditorium. The classes will run through Monday May 22nd. We will be offering 5 and 13 WPM CW, Novice/Tech, General and Extra theory. CW and Extra theory will be taught the first hour starting at 7 PM followed by Novice/Tech and General theory the second hour. Bear in mind that even if the FCC should announce a license restructuring plan, these changes will not be immediate. Additionally, it seems that 5 WPM CW very well may result in gaining meaningful HF privileges. Something to think about for Spring.

As license class director, I'd like to thank the staff of instructors and the VE testing team for an outstanding effort on their part.

Following are the successful results of the class test session on Monday December 13th.

In no particular order:

Barbara Barnes	KC2FUF	Tech	new
Virginia Hartley	KC2FUJ	Tech	new
Dennis Rings	KC2FUG	Tech	new
Carol Fournia	KC2FUI	Tech	new
Clarence Bullock	KC2FUE	Tech-Plus	new
Howard Greenwald	KC2ERG	Tech-Plus	upgrade
Paul Robertson	N2XZF	Tech-Plus	upgrade
Jim Glendenning	KB2YXM	Tech-Plus	upgrade
Timmy Brown	KC2FEQ	Tech-Plus	upgrade
Russell Stingel	KC2FUH	General	new
Lincoln Wainright	N2XVZ	General	upgrade
Donald Peters	W2ELK	Advanced	upgrade
Bill Kasperkoski	WB2SXY	Extra	upgrade

By the time you read this issue of the Rag, it is probable that some of the new licensees have upgraded. at other testing sessions. Russell Stingel ran out of time or he likely would be a **new Extra**.

Public Service 2000

Ed Holdsworth, N2EH

The time has come to look forward to another year of exciting Public Service events and think seriously about which, if not all, to participate in. It's a great feeling to be able to put your operating skills to work and realize a positive feeling for contributing in some degree to Community Service.

Most of the following haven't as yet been assigned dates, however they will be shortly.

- Lilac 10K Run
- Susquehannock Trail Pro Rally
- Tour de Cure
- Corporate Challenge
- Stuart Horse Trials
- Walnut Hill Driving Competition
- Ginna Nuclear Exercises
- ADA Walk-A-Thon
- Geneseo Hunt Club
- Henrietta Dualathlon
- Pumpkin Patrol

The dates will be published as they become available. If you are interested in working an event or more, contact Ed Holdsworth, at 716 624-1929, or use signup sheets at the meetings.

Hamfest-continued from page 1

of the Hamfest on Sunday afternoon.

Don't forget the Awards Banquet held at the Thruway Marriott Hotel on West Henrietta Road. This is a great place to top off your day and unwind after being at the Hamfest all day. Have a great dinner and enjoy talking with all your friends as well as learning who will receive the Atlantic Division Awards for "Amateur Of The Year", "Grand Ole Ham", and "Technical Achievement". Everyone is welcome to attend the dinner by coming directly from the Hamfest to the Marriott. There is no need to have to go home and get all dressed up.

By the way, you should submit the names of anyone you feel is deserving of one of the awards to the Awards Committee. Bernie Fuller, N3EFN Vice Director, Atlantic Division chairs this committee. All nominations need to be in by April 1, 2000. Additional information on submitting names at the ARRL's web site or ask one of RaRa's officers.

The eighth annual Atlantic Divisions Affiliated Club meeting will be held on Friday afternoon at 2:30 PM. Each affiliated club should have two of

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RAPS PSK-31 Is There!

Roger Harnaart, WB2BWQ

There really is a different type of modulation out on the airwaves. Jon, N2JAC, proved that to the people at the last RAPS meeting. It would have been a bit much to bring a low band rig, power supply and a long wire aerial (ask Ed Gable) to the meeting. He brought a tape recorder and a computer instead, and got the same results. Jon recorded various PSK-31 signals on the tape so we could hear the sounds. They ranged from a faint tone on a lot of noise to a solid beat note, very clear. That was it. No, or very few, warbles, breaks, glitches or hiccups. When he ran these through the computer, out came letters and words on the screen. The text did contain a few errors through, not error free like packet, but it did work.

The program he used to transform this "noise" into text is a great piece of magic. You can change variables on the screen, after you get the general idea of what to do. The best way is to let the program do most of the work for you.

The tuning indicator is kind of interesting to watch while it does its job. Did you ever watch the tip of a cats tail while the cat was studying how to catch a mouse? It wiggles back and forth at pretty good rate. That's roughly the way the tuning indicator whips around while trying to keep the signal tuned in. See Jon for details, or a copy of the program.

There is another program which does the same job. Mike, KB2CHP, also brought along a copy of one he picked out of the blue. Although he didn't run a demonstration, he said it works the same way and the results are about equal on the screen. He would be glad to talk about it.

It was a pretty good meeting, meaning you never know what you'll learn at a RAPS session, and we did learn.

Next month might just turn into a hands on "get it on the air" night. There may be some test equipment, tools and stuff to make things work. Got a problem? Bring it along on January 13th, at 7:30 PM, to 111 Westfall Road, —if Y2K didn't get you.

Hamfest-continued from page 8

their officers attend this meeting to stay up to date as to what is going on within their Division and at ARRL Headquarters. Any new happenings within the FCC will also be covered. FCC will also be covered. Bernie Fuller, N3EFN Vice Director, Atlantic Division will moderate this meeting.

If you are on the Internet you can keep up to date

RaRa/ARRL Award Checking

Ed Gable, K2MP/W2AN

As a service to you, members of RaRa, an ARRL Special Service Club, you can have QSL cards verified for ARRL Worked All States (WAS) and VHF/UHF Century Club (VUCC) Awards. Contact Ed Gable, K2MP/W2AN, for an appointment at 716 392-2088 or k2mp@eznet.net.

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ICOM 751A,

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Bob Moore, N2USB, 716 663-5802 or n2usb@rochester.rr.com

Hamfest-continued

on the Hamfest by visiting the web site at www.rochesterhamfest.org/. This will give you all the latest information such as what exhibitors are already signed up; ticket information; and what programs will be taking place. I hope you are looking forward to being at the Rochester Hamfest.

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