



# the **RARA RAG**

Published by

**ROCHESTER AMATEUR RADIO ASSOCIATION, INC.**

VOL. 45

DECEMBER 1992

No. 4

## **ANNUAL JOINT MEETING** **with the Kodak Amateur Radio Clubs** **DECEMBER 5, 1992; 8:00 PM** **Kodak Camera Club Theater** **200 Ridge Road West** *(Plenty of free parking.)*

Yes, it's time once again to share our annual pre-holiday meeting with the Kodak Amateur Radio Clubs at their recreational facility on Ridge Road. As tradition has it, we supply the speaker and they supply the treats. Well, this year we have a real treat for all those hams interested in computers. The time is just right too, just before the traditional season of gift giving. And what better gift to give yourself than a practical knowledge of the common garden variety PC clone.

*"I've got a 386-33, with a 80387-33 co-processor, 32 K RAM Cache and 32Mb of DRAM".* If this sounds like the typical alphanumeric soup people have been feeding you and you're getting mighty tired of the taste, not to mention you'd like to tell then to cut to the chase; this is the meeting for you. We've brought an expert on board with extensive PC experience and *he's not in sales!*

Curtis Braun (N2HKD) is another ham, just like you and me, that wants the straight story on personal computers and the most economical way to care and feed them. He's been experimenting with personal computers for many years and knows what makes them tick. In addition, he can put it in terms I can understand, and that's going some.

Curtis will give us an overview of the choices that today's technology really offers us with the emphasis on what works. His talk will lead the novice computer user and computer wizard to an understanding of task oriented computing. The biggest, fastest, "*alphabet soup*" computer is not always the right machine to own. Learn how to tell what you need before you pay too much for that fancy box. Learn how to enhance what you

already have, what options you have with that machine you already own – before you decide to put it on the scrap heap.

There will also be an opportunity to ask Curtis questions about your system. Lots of other people probably have systems similar to yours and would love to know what the possibilities are. Bring your easy and tough questions to the meeting.

To get the best answer possible, read the literature on the system you want to get or on the system you have. Write it down and send it to Curtis in advance at any of the following addresses:

Packet – N2HKD@WB2PSI

Internet via N2HKD@computronics.com

or US Mail – PO. Box 1002

Fairport, NY 14450

or you could just bring it with you.

I'll see you there. I'll be the one with the big note pad full of questions.

## **IS THIS YOUR FINAL RAG?**

All RaRa memberships expired on October 31st. However a two month courtesy grace period is extended for those few procrastinators. If your mailing label indicates an "*Oct 92*" expiration date, your renewal has not yet been received. To keep your *RaRa Rag* coming uninterrupted and to insure receipt of your copy of the new 1993 *RaRa DIRECTORY* to be mailed to all paid-up members in January, send in your renewal form today or bring it to the December meeting. If you need another application, just contact the Membership Chairman.

### **SILENT KEYS**

**CHARLES J. WITMAN**

**WB2FZB**

*October 20, 1992*

**WILLIAM B. GILLETTE**

**WB2KIW**

*September 24, 1992*

*(Correction)*

# the **RaRa Rag**

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**ROCHESTER AMATEUR RADIO ASSOCIATION, INC.**  
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## SPOTLIGHT ON RaRa MEMBER **ED GABLE K2MP/W2AN/AAR2FH** **Ex-WPE2JR, WN2MPM, 1TDFD, WB2LFS**

Ed Gable can't remember a time that he wasn't interested in electricity and radio but he got serious when entering Hilton High School. When elected president of the science club he right away started a SWL group and got many interested in short wave radio. Ed was really curious about those people talking in the area marked *AMATEUR* on the dial of his floor model Silver-tone radio and convinced his Dad to drive him all the way to Spencerport to meet one of those Ham guys - it was Bruce Kelley, W2ICE.

Ed taught himself the code by practicing every night and crammed theory from an old Ameco book, all the time thinking how nice it would be to have someone to learn from. He received WN2MPM in 1957 and dropped the "N" seven months later with his General ticket. By then he already had his first ham classes started at the high school. Ed also showed an early technical prowess having built his first two transmitters from scratch from old TV parts.

Early in his General career Ed was eager to find out what vast opportunities laid beyond those offered from seven months on one crystal frequency and CW sent on a J-38. It is this need to try new horizons within Amateur Radio which has kept Ed's interest for these 35 years. First it was traffic handling where his NTS Net Certificate is dated 1958, soon followed by experiments on VHF.

VHF operations were especially key to his ham career as it was there where Ed met for the first time so many local Rochester area Amateurs and became aware of local radio clubs. It didn't take long for him to join everything in sight and foster a second ham radio career doctrine; if your gonna join, do it right, dive in with both feet and get active - give back some of what you take. This credo has led Ed to be Secretary and twice Chairman of the Rochester VHF Group. Secretary, Chairman and Technical Committeeman for the Rochester Radio Repeater Association. Board of Directors, Vice-President and President of the Rochester Amateur Radio Association. Membership Chairman and Vice-President for the Rochester S-80 Computer Club. Board of Directors, Convention Committee Chairman and Amateur Radio Curator for Antique Wireless Association. Assistant Director, American Radio Relay League, Atlantic Division. ARRL, Atlantic Division, *Radio Amateur of the Year*, 1982.

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Amateur Radio News Service

Ed always enjoyed, and had a great flair for teaching others about ham radio. Ed just recently laid down the chalk after many years of teaching RaRa's Tech/General theory and was the Licensing Class Director for two years.

Ed has never been inactive as a ham. Even in the Army he always managed to find activity no matter where he was stationed and especially is fond of his time as IIDFD while stationed in Northern Italy where 20 Mtr DX was a favorite pastime.

Despite being heavily involved with various organizations, Ed continued to try new things and explore opportunities. He has achieved WAC, WAS VUCC, several Satellite awards, 50 MHz 600 Club, and dozens more. Ed operates all phone and digital modes from 1.8 to 450 MHz.

Ed has spent most of his ham career also involved with public service be it through traffic handling, association with RACES and ARES and more recently through MARS activity starting with involvement with Desert Storm traffic. Ed is an Assistant Radio Officer for Monroe County RACES. He also is a Public Service Committee Chairman where for the last six years he has organized RaRa's involvement in the popular Triathlon Sporting event radio communications needs.

Ed has served on numerous other area Amateur Committees including Ticket Chairman for the Rochester Hamfest, VE Examiner, ARRL Field Awards Manager for VUCC and WAS awards, RaRa TVI Committee, Committee Chairman for the 1992 Micro-Wave Update Conference, RaRa Rag contributing columnist for VHF, RRRRA and 20 Year articles, and probably more forgotten memories.

The future moves on. Ed has more digital modes to explore and is trying to grow bigger antennas at his new Hilton QTH.

Ed concludes; *"I've given a lot, I guess, only others can judge that - but I've received a lot too. This ham radio game is just filled with wonderful people who over the years have let me join them in their endeavors. Yeh, me, a young farm boy who discovered AMATEUR radio on the dial of a Silvertone floor radio"*.

From all of the members of RaRa and other hams who's lives you have touched over the years, a heart felt thank you and 73.

**Rochester  
HAMFEST**

MAY 21, 22, 23, 1993

## DECEMBER CALENDAR

- 4 - RaRa-Kodak Joint Meeting - 8:00 p.m.  
Kodak Camera Club Theater  
200 Ridge Road West
- 19 - RaRa VEC Testing, 111 Westfall Road
- 25 - Christmas Day

## SHOW RaRa PRIDE EASILY

How nice it would look if all of the people attending RaRa meetings or working public service events had a common connecting link (like a jacket) to show the public who we are and that we are proud to show it. You can make your own start towards that goal by purchasing a new 1992 RaRa jacket with the Club's Green and Gold colors, the RaRa lettering on the back, and your own Name and Call on the front. The jackets are available in Nylon, Gold or Green with opposite color lettering. One style has knitted collar, cuffs and waist, the other has regular style collar, elastic cuffs and drawstring waist. Both are available with various linings, to suit the environment you wish to wear it in. Someone, possibly me, will be at the January meeting to show the catalog and take orders for these jackets. I am not sure about the Kodak meeting availability. The order will be placed about the second week in January and delivery should be in time for the March meeting and early Spring wearing. Stop by the "Gold T Shirt" sign to look at styles and prices. Think how nice you would look.

Get a new jacket, work at the Empire State Games and show people from all over New York that I AM PART OF RaRa.

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# THE AMATEUR MICROWAVE REGION

by Tim Low, N6ZUC, *The Readout*

Somewhere between the highest band most of us operate, 440 mhz, and visible light, is that strange portion of the spectrum known as, the microwave region. The very mention of the term microwave brings visions of what once was alive, now dinner, sizzling away behind a little glass and screen door. Yes, believe it or not Ripley, there are Amateurs out there communicating via microwaves. And no, I'm not trying to tell you they're out there screaming into their ovens. (Ham in the microwave? Hmmmm!) No No!

This is a region populated by strange sounding equipment like bricks, parabolic dishes, and wave guides. Though it sounds it, it's not really all that complicated, and we'll take a look at what it takes to get up and on the air.

## REVIEWING SPECTRUM

First off, a little reviewing of the frequency spectrum just may be in order here. What we think of as radio frequencies, occupies only a small portion of the total spectrum. The spectrum runs from all the way below the 60 hertz AC line frequency that is the power standard here in the US, up through visible light and on into the region of the x-rays and gamma rays, and beyond. What is commonly referred to as microwaves, run from 1 GHz (one billion hertz), up to just below the infrared light region at around 10 THz (ten trillion hertz). In all actuality, microwave refers to the physical length of the wave itself.

## THE FORMULA

By calculation, using the formula  $300,000 / .0001$ , where 300,000 is the speed of light in kilometers per second, and .0001 is the length in meters, (micro meters in this case), we find that the true microwave region starts at 3 GHz, and continues up to 33 GHz. For our purposes, we will consider anything above the Amateur 23 centimeter band, (1296, or 1.2 GHz), as the microwave region. Though not overly crowded, we Hams are allotted some spectrum up in this region.

## SAFETY RULES

Special consideration are called for when experimenting in these bands. Most notably in the area of safety. Exposure to excessive microwave radiation can be extremely hazardous to your health. This is not to scare you away. If proper safeguards are taken, there is no undue risk to life or limb.

The safety rules for microwave operation are simple. As with all Amateur transmissions, only the minimum power necessary to carry out the

communication should be used. Make sure that all connections for the feed system and antenna are solid, as to prevent leakage, and never, never, stand in front of the antenna when energized. Make sure your antenna is located away from the general public.

## PROPAGATION CHARACTERISTICS

Because of the extreme frequency and extremely small wavelengths involved here, the propagation characteristics are a little different than what we're used to when operating on the lower bands. At these frequencies, all transmission is normally line of site. Unlike the low bands, there is no groundwave, and unlike the VHF region, there is no bending over the horizon. So again, this leaves us with basically point to point communications.

There are cases of "bouncing" the signal off the nearest mountain, and coming up with some incredible distances. I even talked to a guy that claims to have made a 150 mile southerly QSO by pointing his dish north at the nearest mountain. It is possible, but you need the benefit of having a willing mountain close at hand. Normally mountains, unless you are on top of one, are a hindrance to successful microwave operation.

Other detriments to operation in the microwave region is that fact that because of the small wavelength, the signal is easy to block. It doesn't radiate well through heavy vegetation, power lines, etc. In the colder climates, snow can be a factor. Snowflakes just happen to be around a wavelength long at certain microwave frequencies. This has been a problem for TV station studio to transmitter links, Telephone company microwave links, and satellite uplink stations. In certain instances, even a heavy downpour of rain can cause problems. Also working through an inversion layer can screw up the works.

## TALK YOU OUT OF IT?

I have probably mentioned enough problems with the operation of microwave stations now, to talk you out of even considering operation in the microwave bands. If I have, I'm sorry. You'll be missing out on part of what Amateur radio is all about, furthering the state of the art through experimentation.

---

JANUARY MEETING – *The Impossible Antennas* (or is it aeriels)? Returning to the Henrietta Fire Hall for balance of the 1992 - 1993 Club Season. Our speaker will give us practical insight on economical antennas that work where you want to go! This is just in time to start planning for the Spring Antenna Planting Season! Get your copper and aluminum seeds ready for this one!

## PUMPKIN PATROL UPDATE

de Dominic, KB2NCM

As net control operator for Pumpkin Patrol '92 for Monroe and Genesee Counties, I would like to thank all amateurs who helped in one way or another this year. All 16 bridges in Monroe County and 75% of the bridges in Genesee County were covered during the 7 ½ hours we were on Pumpkin watch Friday and Saturday nights, October 30 & 31st, 1992. There were a few minor incidences involving eggs and pumpkins, but in general there was no damage to anybody or any property while we were on duty.

Across the state we covered 116 bridges with over 200 amateurs involved. That's a 35% increase over last year. I'm sure you'll see some familiar names and call signs below. Pat them on the back when you see them for a job well done:

Kevin, N2RLY  
Fred, W2DUC  
Bill, WA2CER  
Ken, KB2hyt  
Russ, N2EZX  
Dave, KD2RO  
Jack, AA2CE  
Chuck, KF2DO  
Shelly, N2SGO  
Max, N2MXD  
Marcy, WA2URE  
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Kory, N2RCS  
Steve, KD2KQ  
Tim, KB2PBR  
Bill, KB2HRH  
Dave, NF2G  
Dee, N2PHA  
Fred, KA2VGH  
Chuck, WG2A  
Bob, W2XG  
John, N2JDN  
John, KB2FXI  
Keith, KE2DI  
Charlie, N2JQA  
Dwight, K2KWK

This is a great public service function – the personal satisfaction is very high. It is getting attention from the media, and the public, truckers, and all police functions greatly appreciate what

## THE RaRa RAG YEARS AGO

by Ed Gable, K2MP

20 YEARS AGO – DECEMBER 1972: RaRa Secretary Joe Hood, K2YAH, wrote of the December meeting featuring Paul Evans, W2YYW, speaking on a CW decoder he designed and built. The downtown McCurdy's store location appeared to be a very popular location for the Code and Theory classes with 128 students registering. Bob Lauzon, WB2NSD; Dave Hassett, K2SQI and Joe Hood, K2YAH, were instructors. Ash Palmer K2EAW, wrote an article describing insurance options on ham equipment. The remaining two and one-half pages told of yet more Part 97 FCC rule changes. These included strengthening of the third party rule and non-business communications, yet allowing comms such as Red Cross, eye bank, etc. From the want ads you could buy a used Mosely tribander from W2KFU for fifty dollars.

40 YEARS AGO – DECEMBER 1952: The DX Group reported great fun at the CQ DX contest with W2DOD snagging ZS9I on 7 Mc, Sax, W2SAW, and Hank, W2UTH, were spinning new beams while W2ICE energized his rhombic for 75 meter European contacts. Ed Snow, W2BZN, demonstrated how to etch quartz crystals at the December meeting. At a meeting of the VHF Group, Charles Ammermann, W3MLM, spoke of his work on 1200 Mc. He reports reliable signals out to several miles. The *RaRa Rag* printed all ARRL official bulletins including NR371, 11/07/52, removing Japan and Lebenon from the banned countries list. From the want ads you could buy a Gonset triband converter from W2CZT for thirty-five dollars.

we are doing. Hope to see more of you next year. With more of you out there, we can start covering troublesome bridges on 390, 490 and 590.

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# RaRa ANNUAL

## WINTER FUNFEST

Mark your calendar now.

### BOWLING OUTING SCHEDULED FOR JANUARY

*Dateline -- Rochester, NY --* RaRa sponsors Family (and singles too) Bowling Fun. On Saturday, January 9th, we can all enjoy a few games of that famous ten pin sport at bargain rates thanks to the skillful negotiation of Chris Reich, WB2DYJ, and the consumer power of a one thousand strong membership.

So, what's the deal you say. I can go bowling anytime I want. We have "bumpers". I had to get that in just for me. But the bumpers will be available for all who need or want them. (Maybe some of the younger people will want them besides me.) The best part is; two games of bowling, shoe rental, all the pizza and pop you can consume for only \$5.00 per person. Cheaper than a movie and eminently more filling. This is an event that is rated "F", for FUN!

If you want to take advantage of this limited offer (Only thirty-five places available!), send in your reservation today! Send check or money order, payable to RaRa, to hold your place. We have to know by December 17th, our provider, Terrace Gardens on Ridgeway Avenue, needs to get an accurate count so they don't run out of pizza. (Let us know if you're a real pizza aficionado, we'll have them make extra!)

(See back page.)

**FOR SALE** - Ten Tec Argosy 25 HF CW/SSB XCVR, solid state 6 band rig, including matching power supply, microphone w/desk stand, 500 Hz crystal CW filter, 2 position audio filter, notch filter, full break-in (QSK). Asking \$500.00. Bernie Agins, KD2CU - 359-2947.



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## THE PRESIDENT'S CORNER

by Lloyd R. Caves, WB2EFU

RaRa is a club affiliated with the ARRL. This organization also holds the distinction of being a Special Service Club in the ARRL. This is something that everyone in the club should be proud of. As stated before in this column it takes a lot of work and effort by many people for the club to have this honor. I won't go into all that again now, but one thing I did want to point out is that RaRa has the responsibility to voice the opinion of our members in the operation of the ARRL as is needed. At this time the ARRL is thinking of changing from the American Radio Relay League to the American Amateur Radio League (AARL). I have my beliefs on this name change but I won't tell that to you just yet. Instead I would like to have you the members either call me or drop me a note on your feelings about this. From this poll RaRa can, in the name of its members, voice your opinion to our director. I would also encourage you as an individual (if you are a member of the ARRL) to write your director and let him know if you are for or against this name change. Remember, the ARRL is your club just like RaRa is. That means your voice should be heard on all issues so that the clubs can work for you.

The November RaRa auction was a great success, at least to RaRa. We broke a record for the funds that the club earned that evening. This has to mean that a lot of good equipment and items passed hands. I hope that everyone was happy about being able to sell some of your unused things and that the buyers are equally as happy. For those of you that missed being there you missed a good turn out of fellow hams and a lot of fun for all. The two auctioneers, K2VCZ and K2MP, did just an outstanding job in both selling items and keeping us entertained. Lets face it, it is not everyone that can sell an electric paper weight or get K2UW to raise his hand and buy something when he didn't even know what was on the auction block. At least that was one way of getting him set up with a packet station. We will be looking for you on 145.030 Rich!!!

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## LICENSING EXAM TESTING, OCTOBER

by Barbara, AA2CX, and George, AA2FO

CONGRATULATIONS ... To seven members of the amateur radio community who either got their licenses, upgraded, or passed exam elements at the recent RaRa testing session of October 17. They are: Monica Waldron, Lisa Doiron, Bruce Johnson, David Wurster, Patrick O'Hara, Cheryl Young, and Richard Robusto.

Enjoy your new privileges.

Our next session will be on December 19th at 111 Westfall Road starting at 9:00 a.m. Registration begins at 8:30 a.m.

See you there.



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## MICRO WAVE UPDATE 92

by Ed Gable, K2MP

This year's *Micro Wave Update 92* conference was an outstanding success as judged by the 97 attendees. Sponsored this year by *The Rochester VHF Group*, and held at the Holiday Inn in Henrietta, this conference is the mecca for the seriously dedicated microwave enthusiasts. The three day event saw 12 experts in the field present their papers on everything from 24 GHz stations and other deep technical subjects to the use of dental tools for PCB fabrication. Representation was from all U.S. call areas, VE4, VE6, and G4. The gathering was topped off by a Saturday night banquet where the usual keynote speaker was replaced with an entertaining program presented by Bruce Kelley, W2ICE, who dusted off the old AWA *World Above 50 Mcs* program which was a wonderful nostalgia trip for those in attendance. The success of the conference goes to the Rochester VHF Group committee and most notably the Co-Chairman of Dave Halidy, KD5RO/2 and Frank Polino, K2OS. Copies of the conference proceedings, published by the ARRL, will be available at the next RVHF Group meeting or through ARRL HQ.

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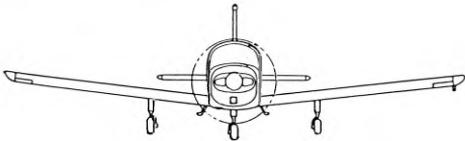
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