



the RARA RAG

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ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 44

NOVEMBER 1991

NO. 3

NOVEMBER 1st — AUCTION MONTH

by Lloyd R. Caves, WB2EFU

November is the month for the Annual RaRa Auction. This year the auction will be held at Henrietta Fire House located at 3129 East Henrietta Road (corner of Lehigh Station Road). The auctioneers for the evening will be our own Dick Goslee, K2VCZ, and Ed Gable, K2MP. Remember that this is a good time to sell that equipment that you no longer use and to try to get a good deal on the things that you would like to add to the station. Please do not bring any boat anchors or you may just find yourself having to carry them back home.

Since the Auction is for members only and one guest bring your membership card with you and show it at the door. If you haven't renewed your membership in RaRa or taken the time to join for the first time this is the place to do it. The membership chairman will be setup and happy to help you with the form and to take care of this little matter. Also, the RaRa Directory will be going to press very soon and will be mailed out to all current members. This is another good reason to be sure your membership is up to date.

(Continued on back page.)

NOVEMBER 1st AUCTION

HENRIETTA FIRE HOUSE

3129 East Henrietta Road
(corner of Lehigh Station Road)
8:00 p.m. — Doors Open at 7:00 p.m.

Open to members only
Members may bring one guest.

IMPORTANT INFORMATION ABOUT THE 60th ANNIVERSARY BANQUET

At the last board meeting it was decided that, due to poor ticket sales, November 3 must be the deadline for tickets. If we do not sell our required number of tickets we must cancel the dinner. If you have ever planned a banquet you realize cancelling the reception is an expensive option.

To refresh your memory the location will be the Diplomat Party House at 1956 Lyell Avenue on Friday evening, December 6, 1991.

There will be a cash bar at 6:30 and Prime Rib Buffet dinner at 7:15. Following dinner we have

(Continued on page 2.)

RaRa ANNIVERSARY DINNER

(Order Form)

Please send me _____ tickets for the Dinner @ \$17.50 per ticket. Orders must be mailed by November 1, 1991.

Mail orders to:

Pete Secrist
257 Dunning Road
Webster, NY 14580

Name _____ Call _____

Address _____

City _____ State _____ Zip _____

Evening phone _____

Amount enclosed _____

the **RaRa RAG**

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IMPORTANT INFORMATION

(Continued from front page.)

invited the League Atlantic Division Director, Hugh Turnbull, and Vice Director, Kay Craigie, to speak. Then there will be a professional entertainment provided by Michael Sutton of "Magic in Motion".

The price per person is \$17.50, and tickets are available from any officer or board member. If you wish, you may send your check to Pete Secrist, WB2SUN, at 257 Dunning Avenue, Webster, NY 14580-3539.

This celebration of our 60th year as an ARRL Affiliated Club promises to be an event that we, as a club, will long remember.

Plan on bringing a friend to join in this totally different celebration and see you there.

Why wait 15 years till the next celebration get your tickets now.

VOL. 44 NOVEMBER 1991 NO. 3

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Amateur Radio News Service

THE RaRa RAG 20 YEARS AGO — NOVEMBER 1971

by Ed Gable, K2MP

This issue announced the November meeting to be the Annual Auction to be held at the Monroe County Farm and Home Center on Highland Avenue. Covering a massive one and a half full pages was a reprint from the *Canandaigua Daily Messenger* which covered the recently held Annual AWA Conference held in that city. The article highlighted such notables as Bruce Kelley, W2ICE, and his barn museum; Dex Deeley, WN2KQI; Linc Cundall, W2QY; Al Crum, W2BWK and many others. The RaRa Board announced a new program whereby members could borrow test equipment from the club's loan closet. Available are a RF signal generator, tube checker, signal tracer, and other such items, many of which were donated by Earl Gaesser, W2ECY. The equipment was managed by Al Mumby, WB2MCP. Glenn Lenhard, WA2NFK, was a new Novice Class Instructor replacing Joe Hood, K2YAH. The Rochester Radio Repeater Association, Russ Schroeder, W2DYY, Chairman, announced they were investigating plans to move their .88 repeater, WA2UWQ/2, to the Kodak Office building on State Street. In his VHF Club Column, John Lucas, WA2BEH, announced the Contest Committee consisting of Tom Moore, WA2IXX; Doug Doonan, WA2MAB; and Chet Owlett, K2OPC. Joan Vogt, WA2YTK, and Florence Kirkbright, WA2QXB, were named to the important post of Refreshment Committee. A new advertiser was Tire World of Webster (Ray Roberts, WA2SSU).

HOW MUCH DOES POWER GET YOU?

How much do you really gain by increasing the power of your transmitter? And how much more could you gain by spending your money on improving your antenna system?

In order to make a change in your signal strength that can be detected by the human ear, you will have to change the power by 3dB. And in order to make a 3 db increase, you will have to *double* your power (no matter where you start). In other words, it won't really do you much good to increase your power from 50 watts to 80 watts. The human ear can't tell the difference until you get up to 100 watts.

On the other hand, if you install a 6dB antenna instead of the basic quarter-wave you have been using, the received signal would be the same as if you had raised your output power to 200 watts (and kept using the quarter-wave antenna). If you have a crummy old piece of coax cable feeding your antenna and the cable has a 3dB loss, you can double your signal just by replacing that cable.

Why do we put so much emphasis on linear amplifiers costing maybe \$500 to \$1000 when more can be accomplished with a few bucks and a little bit of effort to improve the antenna system and the ground system of our stations?

Inspired by article by Herbert Lipson, W8FBH;
Midland ARC via Worldradio via Auto-Call

HOW TO IMPROVE YOUR CW!!!!

Jeff Geller, N6RVZ,
via the W6SD Carrier via Ham News Outlet

Some people have asked how to learn CW or improve their CW prowess.

From personal experience, I wish to offer the following suggestions:

1. Take the microphone that comes with your rig and throw it out!
2. Make at least 2 CW contacts every day with different people, either by calling a CQ or answering one.
3. Work a CW contest such as Novice Round-Up, Field Day, one of the state QSO parties or a DX CW contest, such as the ARRL DX, CQ WPX, CQ Worldwide, IARU or WAE contests. Information on these is available in the contest sections of *QST* and *CQ* magazines.

That's all for now folks. Take care gud lk, 73, es gud DX...

NOVEMBER CALENDAR

- 1 - RaRa Annual Auction
(see announcement for details)
- 8 - VHF Group Meeting - 7:30 p.m.
111 Westfall Road
- 15 - RRRRA Meeting - 8:00 p.m.
Pittsford Town Hall
- 16 - RaRa VE Exams - 8:30 a.m.
111 Westfall Road
- 28 - Thanksgiving

...AND YOU THINK YOU HAVE RED TAPE!

A New Orleans lawyer sought an RFC loan for a client. He was told that the loan would be granted if he could prove satisfactory title to property offered as collateral. The title dated back to 1803 and he had to spend three months to run it down. After sending the information to RFC, he got this reply: "*We received your letter today enclosing application for loan for your client, supported by abstract of title. Let us compliment you on the able manner which you prepared and presented the application. However, you have not cleared the title before the year 1802, and therefore, before final approval can be accorded the application, it will be necessary that the title be cleared of that year*".

Annoyed, the lawyer replied: "*Your letter regarding titles in Case No. 189156 received. I note that you wish titles extended further back than I have presented them. I was unaware that any educated man in the world failed to know that Louisiana was purchased from France in 1803. The title to the land was acquired by France by right of conquest from Spain. The land came into possession of Spain by right of discovery made in 1492 by a sailor named Christopher Columbus, who had been granted the privilege of seeking a new route to India by the then reigning monarch, Isabella. The good queen, being a pious woman and careful about titles, almost, I might say, as the RFC, took the precaution of securing the blessing of the Pope for the voyage before she sold her jewels to help Columbus. Now the Pope, as you know, is the emissary of Jesus Christ, the Son of God, and God, who, it is commonly accepted, made the world. Therefore, I believe it is safe to presume that He also made that part of the world called Louisiana, and I hope you are satisfied*".

Tnx ARNS

SILENT KILLER READY TO STRIKE

by Tim Low, N6ZUC

Bump, hit, spike, surge, transient, brown out, all names given to the general term of line disturbance. No matter what name you give it, it will be deadly to your gear.

Most assume that the power we get when we "plug in", is clean and well regulated by the power company. Most of the time it is. But no system is perfect. Sometimes things happen that are beyond human control.

An example of this might be a tree limb falling on a power line, severing it. All of the sudden, the load on the power grid is reduced. This unloading causes the voltage on the grid to rise sharply. This is what's commonly called a surge. The voltage might rise on a typical 117 volt line, to as much as 180 or 190 volts before the power company can lower the grid back to normal.

If you had a volt meter monitoring the voltage at his time, you would see the voltage instantaneously peak, followed by a slow reduction down to the nominal line voltage. This may take 15 to 30 seconds, or more. During this time your equipment is being damaged.

Another typical disturbance is the brown out. Usually this is caused when your local utility is unable to supply enough power to meet the demand of its customers. Anyone living in a hot climate will have experienced this during the summer months.

Low voltage, if stable, within reason, won't be cause for concern. Problem is, it's usually not stable, as it fluctuates with the load on the grid. Jumping up and down as air conditioners, etc., cycle on and off. This fluctuation can cause the real killer of solid state electronics-transient spikes.

Transients, are in actuality, nothing more than distortion of the AC sine wave. This distortion, can be spikes, superimposed on the 60Hz, (cycles for all the old guys), that is used for power here in the U.S. These spikes are normally only a few millionths of a second in duration, but can reach thousands of volts.

These short duration spikes that your old "fire bottle" rig would take in stride, can wreck havoc with the newer stuff. They love to eat power supplies, motors and microprocessors (computers). Every thing we buy and plug in would have an easier life if all it was fed was pure clean power.

Can we get pure, clean power? How much money do you have? Sure it's possible, but for the average ham it's not practical. There are U.P.S. Systems, (not United Parcel Service, but uninter-

ruptable power source), that are absolute marvels. So fast, that the slightest change in line voltage can cause it to kick in.

These computer controlled wonders convert battery power to AC power. They can fill in brown outs, knock down surges, and will filter out the spikes. Everyone should have one, and a private jet, and a vacation home in Mexico. You get the idea -- they're expensive. So what's a ham to do?

There are all kinds of devices on the market that claim to be the answer to your problems. You've seen them, or bought them. Usually they're nothing more than glorified outlet strips. They all have one thing in common, they don't work very well.

The best way to protect your investment, is to install M.O.V.'S, (metal oxide varistor). They can be purchased at electronic supply houses. They come in different values, indicating the clamping voltage at which they work.

For instance, for your typical 117 volt application, you would want to select the 130 volt device. This allows you sufficient headroom for minor fluctuations that are of no real consequence. You need two of them, one for each leg of the line. You also should install one across the lines. The voltage from line to line is in the range of 208 to 240 volts, (verify the actual voltage by measurement). You need to select an appropriate value clamping voltage for it. A 250 volt device is about right. As far as energy rating, buy the highest value you can afford.

These M.O.V.'S are installed at the mains of your electrical system. They must be mounted with hardware to the well grounded electrical box. If you are not familiar with home electrical systems, get someone who is, or hire an electrician to install them. Always keep safety in mind when working with electricity.

The M.O.V. is a plastic cased, flat, round device, with metal tabs for mounting to your grounded box, and metal tabs to connect a wire (#10 gauge minimum), from the device to the power lines. All connections must be solid. The device must be mounted firmly to the box with a good electrical connection. This means scraping away some paint so you have a good metal to metal contact.

Now the bad news. As my old electronics instructor used to say, "*there's always a tradeoff, nothin's free*". Every time the device does its job, it dies a little. How much depends on how hard it's hit. You will have to plan on changing them every couple years or so.

My first experience with the M.O.V. and what it can do, was at a radio station on the north coast. A drunk driver ran into a pole carrying the main power transmission lines, knocking it down. When the lines hit the ground, (hot), the voltage must have hit unbelievable levels. The only damage? Every M.O.V. in the place, connecting wire, and one power strip, were burnt and blown apart. The TV station next door didn't do as well. They didn't have protection. From my nice cozy warm bed that night, I felt bad about those TV engineers working the night away. I felt bad, I did ... really!

While we go about the task of conditioning our power lines, there is another device you might want to consider, a power line filter. It will keep the RF developed in your shack from getting into your home electrical system. Keeping it from feeding back into your rigs power supply. This device also needs to mount firmly to a good solid ground.

Install a metal utility box in your shack. Mount the filters in this box and bring all your shacks electrical service through it. The filter connects directly in line with the wire. Mount outlets to this box, and you have well filtered outlet strip. Some additional M.O.V.'s at this point wouldn't hurt either, preventing spikes generated in the home from reaching your shack.

Power line filters, such as made by Corcom, can be purchased at most electrical supply stores. The Corcom general purpose RFI filter will operate at 20 amps and take a six times overload for up to eight seconds. It is for 120/250 volt use. You need one of these devices for each line you bring into your shack. Prices for these filters are in the 20 to 30 dollar range.

Now for your antenna system. A real good idea also, is to invest in one of the gas discharge lightning suppressors now on the market. The specs are excellent, and your rig won't even know it's on there. It plugs directly in line with the coax and then must be properly bonded to the ground system. I plan on installing one on all my antennas. They are very reasonably priced.

Again, as I said before, nothing is going to protect you from a direct hit. But, it will discharge static build-up and protect you from nearby hits.

73, Tim via The Readout

**Rochester
HAMFEST**

MAY 15-16-17, 1992

U.S.C.G. AUXILIARY RADIO NET

On Wednesday evening, October 9, 1991 amateur radio operators of Division IV, 9th District (ER) United States Coast Guard Auxiliary initiated the U.S.C.G. Auxiliary Amateur Radio Net (FM).

The purpose of this net is to inform auxiliary and non-auxiliarist recreational boaters of current boating safety regulations, requirements for free vessel examinations, proposed federal, state or local bills that could effect boaters, boating safety courses, FCC Marine radio regulations, etc.

This net will be held on alternating Wednesday evenings on the 146.88 N2JC/Repeater - 1900 - 2000 hrs.

Following net call up and announcements all amateur radio operators will be invited to check in and ask questions relative to that evenings subject.

October 23, 1991 Subj: Free Vessel Examinations -- WA2RXE NCS

November 6, 1991 Subj: Sailing Safety -- NV2Y NCS

November 20, 1991 Subj: Marine Radio, Rules, Regulations -- NF2Z NCS

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WHILE OUT OF TOWN

by Pete Secrist, WB2SUN

I was in Raleigh, North Carolina, last month on business. While there I met some transplanted Rochester Hams. Todd Ellis, KS2Z, is doing well in Raleigh now. He invited me to go to the local ham club meeting there. Their club meets monthly on the first Wednesday evening and has many similarities to our RaRa meetings.

The guests and new members were introduced, and a short business meeting followed. The evening's program for this meeting was a demonstration of the portable satellite telephone system you can set up any where in the world. This unit is now being used by news services, such as Peter Arnett of CNN used during the Desert Storm.

Some of the other Hams at the club I met that are transplanted from Rochester were, the President, Jim Du Breck, N4BYO, and the Treasurer, Tim Buehlmann, N4IQA.

I recommend if any of you are out of town, check out the local club meetings and attend if possible. Then take a few notes as to what their club does better and let us know what could be changed. Also let us know what we are doing right.

See all of you at the Auction. Remember to purchase your tickets for the December 6th Banquet celebrating the 60th anniversary as an ARRL Affiliated Club.

WANTED - Multimode 2 meter Tranceiver. Contact KA2BOK, Dave at 716-334-9736. Thank you.



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RaRa JACKETS

There have been several inquiries regarding availability of club jackets.

We must have a minimum quantity of six to place an order. If you are interested in purchasing a RaRa jacket, see Irv Goodman, AF2K, at the Auction, or call 671-4430.

THE G5RV ANTENNA

by Dave Minchella, KE2GE

An antenna that has become quite popular of late, for good reason, is the G5RV. It's a great choice for the ham who has limited real estate, or for someone who wants a single 'all band' antenna (including WARC bands). The G5RV performs well for such a simple antenna. I have a full-size 80 meter G5RV, and a half-size 40 meter version at right angles to each other, and have had excellent signal reports.

The G5RV got its name from a British ham, Louis Varney (G5RV), who first presented it 25 years ago this month. It is an all band antenna, 102 feet long in the 80 meter version (which may be used for 160 meters by a simple wiring change), or 51 feet long in the half-size 40 meter version. The antenna and its matching section look like a reactive load to your transmitter, so a matching network (transmatch) is recommended. It's especially suitable for DX when used at 14 mhz. and above, due to its low angle of radiation. The antenna is commercially available in many versions, or can be 'home brewed' with 102 feet of copper wire and about 30 feet of 300 to 600 ohm ladder line.

For more information on the G5RV, I recommend the following books: *ARRL Antenna Compendium vol. 1*, or *WIFB's Antenna Notebook* by Doug DeMaw (ARRL publication).

Looking for someone going to Dayton next year. Call Benito Ferrandez, EA1CNL/W2, 381-5243.

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Torence Jones, NZ8C; Allen County Amateur Radio Technical Society, Ft. Wayne, Indiana via WorldRadio via Auto-Call

There is little chance that meteorologists can solve the mysteries of weather until they gain an understanding of the mutual attraction of rain and weekends. *Tnx Readers Digest via Auto-Call*

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LATEST MEDICAL TERMINOLOGY

by Joyce Steadham, KC4JZT, a nurse...

Artery	The study of fine paintings
Barium	What you do when CPR fails
Caesarean Section	A district in Rome, Italy
Colic	A sheep dog
Coma	A punctuation mark
Dilate	To live longer
Fester	Quicker
G.I. Series	Baseball games between teams of soldiers
Grippe	A suitcase
Hangnail	A coat hook
Medical Staff	A doctor's cane
Minor Operation	Coal digging
Morbid	A higher offer
Nitrate	Lower than the day rate
Organic	Musical
Outpatient	A person who has fainted
Post Operative	A letter carrier
Protein	In favor of young people
Serology	Study of English knighthood
Secretion	Hiding anything
Tablet	A small table
Tumor	An extra pair
Varicose Veins	Veins which are very close together.

WANTED: Turner Expander 500 mic - must be in excellent condition. Will consider similar amplified/speech compression circuit mic. with its own power source (battery). Call collect any time. Dick, KA2PHQ, 374-5434.

Rochester HAMFEST

MAY 15-16-17, 1992

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STAINLESS STEEL HARDWARE

Anyone who thinks stainless steel hardware is the best thing to use for assembling aluminum structures, especially in areas with high humidity or salt spray, deserves to have it fall on his head. Stainless steel turns to powder very quickly under such conditions, and does it on the inside of the joint where you can't see it until it breaks. Heavy zinc or cadmium plated high-tensile steel is preferable. It doesn't last much longer than stainless steel, but it gives early warning of failure, as the plating disappears from the exposed parts first. The resulting rust is easily seen and maintenance "down time" can be scheduled before the tower or antenna brings itself down. I'm not too good at chemistry, but I understand it is a result of the relative electrochemical potentials between metals (the thing that makes batteries work, and why zinc protects steel until all the zinc corrodes away). Stainless steel and aluminum have a much greater potential difference than zinc and aluminum so, under equal conditions, stainless steel corrodes more quickly than zinc.

Don Hills IBM Antenna Forum in Central Arkansas Newsletter, Caren, Editor WBSFDP via Auto-Call

FROM THE JUNK BOX:

- **PUDDER'S LAW:** Anything that begins well, end badly. Anything that begins badly, ends worse.
- **THOM'S LAW OF MARITAL BLISS:** The length of a marriage is inversely proportional to the amount spent on the wedding.
- **THE AIRPLANE LAW:** When the plane you are on is late, the plane you want to transfer to is on time.

Patrick C. Moyer, N2AIW *Attorney & Counselor-at-Law*

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NOVEMBER 1st —

(Continued from front page.)

Don't forget that December 6th is just around the corner. It will be here sooner than you think. This is the date for the Celebration Banquet of the 60th Anniversary of the affiliation of RaRa and the ARRL. There will be a Prime Rib Buffet and professional entertainment. This will be a good time to take the entire family to a ham radio function where they can enjoy themselves and not feel left out. It is also the time for our non-ham family members to meet each other. Irv Goodman and other board members will be on hand at the auction to sell you your tickets. This is another good reason to come out to the auction. I hope to see you all there!

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