



the **RARA RAG**

Published by
ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 44

JANUARY 1992

NO. 5

HAPPY NEW YEAR

by Lloyd R. Caves, WB2EFU

Well here we are 1992, a brand new year. A new year always brings challenges and interesting things to amateur radio. Before meeting these new challenges we should review some of the history of radio. Eric Melenbacker, transmitter supervisor of WHAM and WVOR, will do just that at the January 3rd meeting at the 40/8 Club. The meeting will start at 8:00 p.m.

Mr. Melenbacker will present some history of the two radio stations. His presentation will then bring us up to date with slides of the current transmitters and studios. He will also offer tours of the studios at Midtown Plaza for the following Thursday evening, January 9th for anyone interested. You must be present at the January 3rd meeting to sign up so that Mr. Melenbacker knows how many would like to attend and can make the proper arrangements.

For those who were unable to attend the December celebration of the 60th anniversary of the affiliation with the ARRL you also missed a chance to speak with Hugh Turnbull, our Atlantic Division Director. Hugh Turnbull, W3ABC, presented RaRa with a plaque to commemorate the 60th year. Bruce Kelley, W2ICE, club historian brought the original certificate of affiliation signed by Hiram Percy Maxim, W1AW, for us to see.

December 21st and 22nd was the operation of a special event station from K2JD, the club station, to celebrate 60 years. I hope everyone had an opportunity to work this station and will receive the certificate to be rewarded for doing so.

Looking forward to a happy and successful new year in amateur radio.

SILENT KEY

MILLARD JUDD

KC2EA

November 14, 1991

JANUARY 3rd MEETING

8:00 p.m.

40 & 8 Club

University Avenue

RDXA TAKES 2nd PLACE!

The Rochester DX Association participated in the 3A Class during Field Day 1991. With approximately 30 RDXA members participating during the weekend the gang at Webster Park put a tough fight and despite some adversity, finished 2nd overall in the class. This was the best finish ever for our club and a round of applause must be given Vic, K1JUL, the Field Day Chairman who planned the operation.

Putting in the effort to place this well may be considered, by some, to be NO FUN. Usually all participants in a club activity such as this have fun any way and it is REALLY GREAT FUN to find out only one other club in the country beat you!!

The only problem this much fun causes is figuring out what to do next year. The club that finished first only allows a limited number of members (generally good contest operators) to operate in order to maximize their score; RDXA tries to let as many operators on as possible.

QSL cards from many of the fall DXpeditions are beginning to arrive in Western NY. The really eye catching card of ZA1A, the Albanian operation, makes it worth the wait. In case you are interested, Albania was at the top of the "Most Wanted" list in DX, but after the ZA1A group ran a total of over 70,000 QSO's it now has become about as rare as Japan!

Join us Tuesday, January 21st, at 111 Westfall Road (7:30 p.m.) for an evening of DX information.

KB2SE

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P.O. Box 93333, Rochester, NY 14692-8333

Editor **Neal Eckhardt, WB2EKP**
80 Authors Avenue, Henrietta, NY 14467 (716-359-2672)

Managing Editor **Dick Goslee, K2VCZ**
24 Elaine Drive, Rochester, NY 14623 (716-334-1762)

Advertising Manager **Dick Goslee, K2VCZ**
24 Elaine Drive, Rochester, NY 14623 (716-334-1762)

RETAILER INSTRUCTS STAFF IN SALES OF AMATEUR GEAR

You don't need a license to buy a ham radio transceiver, but... Now that Radio Shack stores are carrying a two-meter handheld in addition to the 10-meter HTX-100 transceiver, concerns have resurfaced that this might lead to an increase in unlicensed, illegal operation.

This topic is scheduled to be addressed in Radio Shack's October "Merchandising Newsletter", which goes to every Radio Shack store. It was written by Dave Wolf, WO5H, one of the approximately 2,000 licensed Amateurs in the Tandy/Radio Shack organization. In brief, the article makes the following points:

- Radio Shack has a firm policy on the sale of any product for an illegal purpose: "If someone comes in and asks for a couple of walkie-talkies to keep in contact around their warehouse, do not sell them two HTX-202s".
- New products other than CB, directly targeted to business users, are in the works.
- You need a Technician or higher class license to transmit on the two-meter band; **NOW YOU'RE TALKING** is just the book to get someone on their way (and is available in Radio Shack stores).
- Showing a ham license is **NOT** required to buy an HTX-202. There are lots of legitimate reasons why a non-ham might want to buy one. Store personnel are told, "Qualify the customer. Make sure they are aware that the unit is for use **ONLY** for non-commercial purposes on the two-meter Amateur band; that a ham license (Technician class or higher) must be possessed before any transmission is made; that 'bootleggers' are most unwelcome on the ham bands and hams actively police their frequencies.

"We **DO** care if a transceiver is knowingly sold to someone who intends to misuse it and you should too. Those of us most directly involved with the development of the HTX-1 and HTX-202 are licensed, active hams who do not condone illegal operation".

- "Radio Shack has done far more than any other manufacturer or retailer, by placing warnings that one must have a ham license before transmitting on the giftbox, in the owner's manual, in all advertising, and on the product itself".
- "Several times a year, Data Processing mails to your store the names of your local ham clubs and how to get in touch with them. This information is based upon a computer tape we receive from the ARRL (American Radio Relay League)

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Amateur Radio News Service

and is organized by zip code. You are encouraged to publicize the date, time and place of your local ham club's meeting. You are also encouraged to publicize ham license classes in your community".

Tnx Auto-Call

ADDITIONAL RFI POTENTIAL?

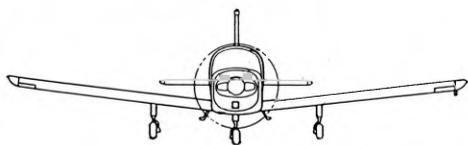
The FCC has released a notice of proposed rule making (ET Docket 91-269) concerning devices and systems regulated under Part 15 of its rules. The Commission seeks to amend Part 15 to "enable the introduction of home automation and communications systems".

These systems include remote appliance and lighting controls, wireless security systems, and intercoms. "Several companies", the Commission says, "promise substantial benefits with systems that integrate a variety of these functions".

The implications for Amateurs of widespread consumer use of such systems are, of course, great. The deadline for reply comments in ET Docket 91-269 is January 8, 1992.

*The ARRL Letter
Vol. 10, No. 20, October 3, 1991*

Pilots have a better Approach!



Find yourself looking at airplanes, wondering what it would be like to fly?

For only \$25 you can find out.
Introductory lesson.
You actually get to fly the airplane.

For Information on the \$25
lesson or Scenic Flights
call Kurt, K3KH,
at 426-7701

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JANUARY CALENDAR

- 1 - New Year's Day
- 3 - RaRa Meeting - 8:00 p.m.
40/8 Club, University Avenue
- 10 - VHF Group - 7:30 p.m. - 111 Westfall Rd.
- 17 - RRRRA Meeting - Pittsford Town Hall
- 18 - RaRa VE Testing - 8:30 a.m.
111 Westfall Road

Check with clubs to verify time and place of meeting.

COMMERCIAL TESTING IN OUR HAM BANDS

The FCC has issued five experimental licenses that permit commercial ventures to develop and test products using spectrum within the confines of certain amateur bands. Two permits have been issued to American Telezone which allow operation in East Texas and Southern California on 2400 - 2483.5 MHz with up to 10 watts ERP. Omni-Point Data Company was the recipient of a license that permits it nationwide use of 902 - 928 MHz, 2400 - 2480 MHz and 5725 - 5780 MHz with one watt out. The fourth permit was issued to Geosyna Satellite Services to permit their use of a half watt ERP for tests in New Jersey with the final license being awarded to Westinghouse Communications Services to permit experimentation between 1250 to (sic) 1350 MHz at an astounding 126 kilowatt ERT! The Westinghouse operation will take place from a site in Anne Arundel, Maryland.

*Tnx PHDARC Newsletter
From Westlink Report, No. 610, 10/2/91
(Ed. note: All of the frequencies listed are available to Amateurs on a secondary, non-interference basis.)*

Tnx Auto-Call

ESTATE SALE: Kenwood TS-430 HF XCVR w/PS-430 DC power supply; Kenwood AT-130 HF Antenna Tuner; Heathkit HD-1410 Keyer; Heathkit HM-102 SWR Bridge; Kenwood TM-221A 2 meter XCVR; AEA "Computer Patch" CP-1 Interface; TTY/PKT Data Switch Box; Heathkit Cantenna; Ten-Tec Power-Mike 80 & 40 meter portable XCVR; KPC-2 Kantronics Communicator II; 6-position coax switch: VOM. Contact Irv Goodman, AF2K, at 671-4430 for details and prices.

'WHOSE UNDER THE CAR?'

Some people tend to cover up the truth when they show up in public with a black eye, broken arm, or using crutches. They try to explain what happened and come up with elaborate stories to explain it. Regardless, the truth usually comes out sooner or later.

One young man now confesses that several years ago he went to a family reunion with extremely red ears and had a heck of a time trying to explain how it occurred although he never admitted how it happen. His story was that he was deeply engrossed in watching a football game and hoisting a few beers.

His wife was ironing clothes nearby when she left the room and left her hot iron next to the telephone. The phone rang and he picked up the hot iron and put it to his ear thinking it was the phone. He was then asked how the other ear got burned. He said, "the man called back" right after he hung up.

Then there is the young couple who had a terrific argument one morning before leaving for work. The wife couldn't get her dress zipped up in back, so she backed up to her husband and motioned to her zipper. He was irritated with her request and briskly whipped the zipper up and down until it broke. The only way he could get her out was to cut the dress off. The wife was furious and boiled over the incident all day. When she got home that evening, she walked through the garage on the way into the house. She saw her husband under a car fixing something with his legs sticking out. She decided her moment for revenge had come. She leaned over, grabbed his pants zipper, and whipped it up and down several times. She then walked into the house only to find her husband standing in the kitchen.

Sheepishly, she asked him who was under the car? He said it was the next door neighbor who had come over to help him work on the car. The acutely embarrassed wife asked her husband to help explain to the neighbor to come out from under the car. He did not respond. They finally had to pull him out and found him unconscious and bleeding from slamming his head into the underside of the car when he got zipped by surprise. And then there is the story about the fellow that could not give a convincing explanation about how he broke his arm. He kept muttering about trying to stick his arm through a car window that he thought was down. That was the public story.

In private, he confessed that it happened at home when his wife brought some potted plants inside that had been out on the patio all day. A

garter snake had hidden in one of the pots and later slithered out across the floor where the wife spotted it.

"I was in the bathtub when I heard her scream", he related. "I thought she was being murdered, so I jumped out to go help her and didn't even grab a towel. When I ran into the living room, she yelled that a snake was under the couch. I got down on my hands and knees to look for it when my dog came up behind me and cold-nosed me. I guess I thought it was the snake and I fainted. My wife thought I had a heart attack and called for an ambulance. I was still groggy when it arrived, so the medics lifted me onto a stretcher.

When they were carrying me out, the snake came out from under the couch and frightened one of the medics. He dropped his end of the stretcher, and that's how I broke my arm".

Tnx Rogue River ARC via The Readout

EVERYTHING YOU'VE EVER WANTED TO KNOW ABOUT THE BALUN!

by Steve Ray, KA5KRI,
in BARC News, Brazos County ARC,
Brownsville, TX via ARNS

Probably the most misunderstood, misstated and maligned term in the world of Ham radio is SWR (I got down to zero; I've got to adjust my SWRs; etc.). But a close second has got to be the balun.

It seems that many, or most, Hams, can't even pronounce the term. The correct pronunciation is BAL, as in BALance, plus UN, as in UNbalanced. BALUN is formed from those two words. The balun is a broadband transformer which is usually installed between a balanced antenna and an unbalanced feed line. These special transformers are generally wound on a ferrite rod or toroid. They can be wound to give an impedance transformation, such as a 4:1 ratio. Most of the baluns used by Hams are probably 1:1, used to connect the 50-ohm coaxial cable to an antenna with about 50 ohms impedance, such as dipoles, verticals and beams with gamma match feed points. Other antennas, such as the folded dipole and some beams, have a feed point impedance of about 200 ohms, so the 4:1 baluns are used there.

Read some of the ads for baluns in the Ham magazines. They will tell you that you must use a balun to "prevent feedline radiation", and to ensure a "nondistorted radiation pattern". By using this great product you will "cure TVI problems"; it will "increase antenna efficiency", "minimize harmonic radiation", "protect against lightning" and "put power in your antenna".

These are just a few of the benefits quoted from ads in *QST*.

But what's the real story? It's true that a balun can help to ensure undistorted radiation patterns IF the antenna is at least one-half wavelength from all objects. This means that an 80-meter dipole would have to be 130 feet or more from the ground, house, trees and other objects. Not many of us have dipoles that high. If your 20-meter beam is more than 60 feet above surrounding objects, then a balun will help prevent a skewed radiation pattern. If you need to match a 50-ohm coaxial feed line to a 200-ohm balanced antenna, then a balun is what you need. For HF antennas mounted less than one-half wavelength from the effective ground, the balun is of no benefit.

What I am saying is that in most cases a balun is of no value, and in fact the use of one can degrade performance and cause many problems. Excessive voltage and power through a balun will saturate the core. When this happens, the core becomes overheated, loses permeability, and can fracture. Also, as the core saturates, it causes the generation of square waves and harmonic radiation. This causes TVI and interference to other services.

The balun, if used incorrectly, can actually cause the SWR to increase. If you need to use a balun on your HF tribander for impedance matching, as I must, then be sure to mount it as close to the feed point as possible. The leads from the balun to the driven elements become a part of the driven elements and can increase SWR if not kept short. So, if you have a beam with a balanced feedpoint and it needs impedance transformation, then use a good balun, properly installed. But on your beam with a gamma match and your wire antennas, such as dipoles, inverted vees, and slopers, save the money that you would spend on a balun. Instead, use it to upgrade to a better feedline, or buy those silver-plated Teflon insulated PL-259s.

FROM THE JUNK BOX:

- **GINSBERG'S THEOREM:**
 1. You can't win.
 2. You can't break even.
 3. You can't even quit the game.
- **GUMPERSON'S LAW:** The probability of anything happening is in inverse ratio to its desirability.
- **LAW OF THE LOST INCH:** In designing any type of construction, no overall dimension can be totaled correctly after 4:40 p.m. Friday.

- **COROLLARY:** The correct total will become self-evident at 9:01 a.m. on Monday.

- **GLIB'S LAW OF UNRELIABILITY:** Computers are unreliable, but humans are even more unreliable.

- **PIYAN:** n. (acronym: "Plus If You Act Now") Any miscellaneous item thrown in on a late night television ad. (Example: a pitchman trying to sell an all purpose carving knife . . . "It's the only knife you'll ever need. Plus if you act now, this complete set of steak knives . . .")

- **WINGO'S AXIOM:** All Finagle's Laws may be bypassed by learning the simple act of doing without thinking.

- **VENI, VIDI, VISA** (We came, we saw, we went shopping.)

- **SECOND LAW OF APPLIED CONFUSION:** Truck deliveries that normally take one day will take five when you are waiting for the truck.

FOR SALE – Kenwood TS-440S with antenna tuner and power supply. \$820.00 - call Johnathan, K4YOT, 244-6028.

HAM SERVICE TELEPHONE NUMBERS

AEA	Customer Service	(206) 775-7373
Alinco	Customer Service	(213) 618-8616
	FAX	(213) 618-8758
	Service	(419) 531-3024
Ameritron	Service	(419) 531-3024
Azden (Am Whole)	Customer Service	(404) 769-8706
	Repair (from 2-4 pm only)	(404) 769-8706
	FAX (from 7 pm - 10 am)	(404) 769-7970
B & W	Customer Service	(215) 788-5581
Butternut	Service/parts/technical information	(512) 398-7117
	Service/parts/technical information	(603) 627-7879
Cushcraft	Service/parts/technical information	(603) 627-7879
ETO	Customer Service	(719) 260-1191
Hy-Gain	Rotor Parts	(402) 465-7021
	Antenna/Tower/parts	(402) 465-7022
	Technical Assistance	(800) 328-3771
	Service	(206) 454-7619
ICOM	Parts	(206) 454-8155
	Customer Service	(212) 355-1180
JRC	Service	(213) 639-7140
	Parts	(213) 639-9000
	FAX	(213) 609-2127
	Service/parts	(601) 323-5859
MFJ	Service/parts	(601) 323-5859
Telrex	Customer Service	(201) 775-7252

*Credit: Via Packet Network
via The BARC Circuit*

CQ CONTEST

January brings the largest local participation in any contest of the year. This year, as in the past, hundreds of local hams will get on the air either to get a good score to submit or to just give a contact to those putting in the big effort. This has become a local tradition and it is hoped that there will be more participants than ever this year. Here are a few things you should think about that weekend:

FM OPERATION – Those operating FM only will be using channelized type operation and the best advise to be offered is **SPREAD OUT**. The 2 Meter band allows operations on 146.49, .55, .58, 147.51, .54, and .57 along with a few more obscure frequencies. The local operators tend to jam into the three frequencies on 146 and QRM each other unmercifully. The obvious solution is to spread out to the 147 MHz segment and spread the pile-up out. In channelized operation the biggest signal **ALWAYS** wins and people always step on one another; that's the nature of the beast. But, if we spread out more people will hear each other – the results: more contacts. If we **LISTEN** before calling CQ we may let someone make a contact in one try instead of three or four and then **WE** get to work that new one faster. If you hear someone working a VE3, don't call until they finish the QSO in progress; most radios don't receive well while transmitting.

And finally, spread out again; use the 147 MHz frequencies for some fast hassle free QSO's.

SSB and CW OPERATIONS – The only thing that happens here is the **BIRD DOGGING** of the strong stations frequency. If someone is running 800 watts and a 60 element four stack and you hear them work a grid you need; **DO NOT** try to work them on that frequency. The guy running them, for that moment, **OWNS THE FREQUENCY!!** Move up 5 or 10 KHZ and call the station you heard or call CQ! This is a bad habit acquired from FM operation and should not be carried to the SSB and CW frequencies.

P.S. The N2WK call will be heard this January, and Wayne hopes to work everyone locally, especially you new people on the band. (**YOU WILL HEAR N2WK ON THE 147 FREQUENCIES.**) The exchange is just your Grid Square designator, which for most in the immediate Rochester area is FN13. If you are not sure of your Grid, ask someone, you will get an answer! Good luck January 18th and 19th.

KB2SE

THE RaRa RAG 20 YEARS AGO — JANUARY 1972

by Ed Gable, K2MP

Within this copy, Joe Hood, K2YAH, announced the January meeting to be a film on fire fighting communications. And what better place to offer such a show then RaRa's first trip to the Police-Fire Training Academy on Scottsville Road. Helen Smith, WA2YRH, was glad to take your order for tickets to the eleventh annual RaRa Valentine's Day Dinner-Dance. Six dollars would bring you the entire evening complete with a prime rib dinner. Then President Richard Koehn, WB2SNA, reports that Bob Lauzon, WB2NSD, will be taking over the licensing course activities. In the RRRRA column it was announced that modulated CW activity was a new mode of interest for FM'ers using 146.70 locally. Charlie Mills, K2LDU, and Bob Erskin, W2NVZ, were also using a strange mode, fast scan TV on 445.5 MHz. Local propagation expert Mel Wilson, W2BOC, was awarded the John Chambers, W6NLZ, memorial trophy by the Central States VHF Society for his life long efforts and contribution to the understanding of 50 MHz propagation. After almost three years with no change, Rochester Radio Supply finally changed their full back page advertisement. The change was from a pix of the Mosely Classic CL-20 to that of a TA-33 tribander. That ad continued for another 14 months! The RaRa Staff 20 years ago consisted of Managing Editor Harold Smith, WA2KND; Art Director Russ Hauer, K2PLO; Chief Photographer Al Crum, W2BWK; with Staffer's Ed Gable, W2MPM; Joe Hood, K2YAH; and Helen Smith, WA2YRH.

Editor's Note: I have enjoyed doing this "20 Year" article for many years now but was quite concerned as my RaRa Rag collection ended with this 20 year old January 1972 edition. To the rescue was a most generous donation of complete, hard bound editions of RaRa Rags from the estate of Linc Cundall, W2LC. My thanks to his wife, Helen, for allowing the tradition to continue. In fact, the copies on hand now go back to February 1949. Anyone interested in a 20/40 year article?

FOR SALE – Drake TR4 with ps/speaker/meter Console - \$250.00; Swan 500C with ps - \$250.00; CRD AR-22A rotor and control - \$50.00; Cobra 139XL modified - \$100.00; Eico 5' scope, Eico VOM, Paco Signal Generator, Paco PS, RCA VTVM, Eico multimeter, all - \$100.00; Kenwood TS700 - \$250.00; Heathkit DX60 & VFO - \$50.00. Len, WA2ZNC - 1-229-5470.

DIVISION IV AUXILIARY AMATEUR RADIO NET SCHEDULE

by Robert O'Connell, NF2Z

The Division IV Auxiliary Amateur Radio will take place at 1900 EST on the 146.88 MHz repeater according to the following schedule.

Date	NCS	ALT-NCS
Jan. 1, 1992	NF2Z	WB8JPX
Jan. 15, 1992	WB8JPX	WA2RXE
Jan. 29, 1992	NV2Y	N2JSZ

Our thanks to the Rochester Radio Repeater Association for the use of the N2JC repeater.

FOR SALE – Portable all band HF antenna permanently installed on ground plane roof of 22 ft. motor home. Wired for 12V power to radios. Includes 2.8 KW generator, microwave oven and all options. 36K miles on MH. Great for Field Day coast to coast. Phone 377-4837 – Sid, KD2WV.

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SHUTTLE ASTRONAUTS ADD TWO TO RANKS OF AMATEUR RADIO

Two more NASA Shuttle astronauts have passed their Amateur exams. Brian Duffy and David Leestma, both scheduled to fly STS-45 in March, 1992, have passed the Technician/Morse exams and await call signs. As in the past, organizers of the Shuttle Amateur Radio EXperiment (SAREX) will ask for FCC waivers to allow the pair to operate from space (FCC rules allow "space operation" only by Extra class Amateurs).

Flight STS-45 will fly a high inclination orbit, as did the pioneer Amateur Radio shuttles of Owen Garriott and Tony England, and so will be more accessible to Amateurs outside the tropics. As a result of the increased coverage allowed by these orbits, some general operating is hoped for. Some contacts with schools also are planned, and details will be available as the launch date approaches.

Farther in the future several more ham-astronauts are tentatively scheduled to fly again. They are: Jay Apt, N5QWL (Sept. '92); Jerry Ross, N5SCW (March '93); Linda Godwin, N5RAX (Oct. '93); and Ron Parise, WA4SIR (Sept. '94).

Tnx Auto-Call

NEW ADVANCED AT NOVEMBER TESTS FCC SETS 1992 TEST FEE AT \$5.40

by Bob, WE2T - 334-1103

Congratulations to Bob Verstreet, WA2RXE, who upgraded to Advanced and Dale DuRoss, N2LSU, who became a new General at our November tests.

Eric Hotaling, KA2GYR, upgraded to tech and the following people became new hams (codeless tech): Alexander Sienkiewicz and James Dermody.

Our next test session is January 18, 1992 and the 1992 test fee has increased to \$5.40; it is always helpful if applicants bring the exact change. In addition, you should also bring pencil and pen and your identification, and any Certificates of Successful Completion and of course, your present license and a copy of it.

For more info, see the September Rag or phone me; I'd also like to thank the following Volunteer Examiners: Lou, K2ANC; Sid, KD2WV; Barb, AA2CX; Jim, K2GBR; Stan, WM3D; and George, AA1FO.

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"WANTED" OLD RADIOS

AM BROADCAST, TABLE TOP
VINTAGE 1940 TO 1950

WA2ZNC "LEN"
716-229-5470

122 W. Lake Road, Honeoye, NY 14471

Advertisement

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

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