

# The RARA RAG

Published by

The Rochester Amateur Radio Association  
INCORPORATED

VOL. 28

DECEMBER 1975

NO. 4

## December 5th Meeting - - - "Instrumentation for the Ham"

by Jim Collinsworth, WB2EDT

Terry Rogers, WA2BFP/WA4BVG has planned a stimulating, informative presentation and demonstration for our December 5 meeting at the Farm and Home Center on Highland Avenue.

Terry's instrumentation program will feature practical applications of oscilloscopes and Cathode Ray Tubes in general in many ham shack applications--both HF and higher frequency work. You can expect to see some easy but worthwhile tips, techniques and measurement applications that the average amateur operator fails to take advantage of.

Most of the areas Terry will cover can be readily employed by most hams--but in addition we will have on hand some more sophisticated instrumentation to show what is available in commercial state-of-the-art equipment.

Terry comes well qualified as a speaker-entertainer, as well as an electronics expert. He is employed by Harris RF Division as an engineer in UHF/VHF communications equipment.

A yankee originally from Auburn, he spent several years in Raleigh, North Carolina rebel country employed by Aerotron in VHF equipment. Terry graduated from Albany State with a degree in Physics and a strong preliminary background in engineering.

Terry also spent several years as a disc jockey--which may account for some of the entertaining, but unintelligible quips he frequently makes over local 2-meter repeaters.

Be sure to attend this meeting--it promises to provide interesting and informative material for hams at all levels from newcomer novices to old time extras!

## Valentine Dinner-Dance

Watch next month's RaRa Rag for details about the annual Valentine Dinner-Dance. This is an event no one will want to miss.

For the newcomers to RaRa, the Dinner-Dance is our way of expressing thanks to our spouses for putting up with us throughout the year. It is the one night of the year when we attend a radio club function where radio is not the topic of discussion.

## GENERAL LICENSING CLASS ANNOUNCED

by Ditson Dawes

Starting in February, 1976 we will hold another licensing class for a General Class ticket by May. The class will be timed to be completed just before the Rochester Hamfest where the FCC has again agreed to administer examinations for Technician, General, Advanced and Extra Class tickets.

The announced course will be held at CD Headquarters on Monday evenings from 7:30 until 9:30 p.m. It will consist of code from the class starting level (to be determined) up to 15 WPM. The theory course will be the same as last year. Seminar type discussions geared to start the students thinking and to help them gain enough knowledge to pass their test. The course is NOT intended to make an Electronic Engineer out of anybody - its sole purpose is to get you the desired license. Preregistration is essential so we can plan for the proper size class. If you're interested send a postcard indicating your interest to Bob Lauzon, WB2NSD, Drawer G, Pittsford, N.Y. 14534 and be sure to include your address and telephone number.

Students must be members of RaRa. If already licensed regular membership is \$5.00, if the student has no license an Associate Membership is \$2.00. If you are not a member see the Membership Chairman, Bud Young, WA2UGE, at any RaRa meeting.

## WNY HAMFEST

The 1976 Western New York Hamfest is scheduled for Saturday, May 22, at the Monroe County Fairgrounds.

Those who gather on Friday, May 21st, are directed this year to a new headquarters location, the Rochester Marriott Inn, on route 15, West Henrietta Road, directly across from Thruway exit 46.

The Hamfest ad running in all the amateur journals tells of the Marriott as new headquarters. Many have asked what about the Fairgrounds. The answer is stated above. Please tell your friends how it works.

For anyone who wishes to organize a hospitality room or suite for a special interest group, please make your wishes known as soon as possible to Hamfest general chairman, Harold Smith, WA2KND.

# The RARA RAG

Published by

The Rochester Amateur Radio Association  
INCORPORATED

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IBM Computer, 360  
Editorial office, 153 Mason Avenue, Rochester,  
N. Y. 14626. Telephone; 716-225-5260.

**VOL. 28                      DECEMBER 1975                      NO. 4**

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The RaRa Rag is published monthly except July and August by the Rochester Amateur Radio Association, P. O. Box 1388, Rochester, N. Y. 14603. Subscription price \$1.00 per year (included in \$5.00 annual membership dues). Second class postage paid at Rochester, N. Y.

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## ..... From the President

by Bill March, WA2CER

As you read in the November Rag, the club station is now available for membership use every Monday evening, starting about 7:00 p.m. The 80-40 meter inverted V antenna is about 70 feet high at the apex and works great. Station trustee Ed Holdsworth, WA2EKR, and Ed Gable, W2MPM, are always in attendance.

The SB-104 transceiver functions well and I would like to thank the donors to date. They are: Linc, W2QY; Lia, WA2NFFY; George, K2OIU; Gene, WB2BAM; Earl, W2ECY; John, W2BLU; Ed, W2MPM; Bob, W2PYW; Jim, W2HLF; Irv, WB2WCE; and myself. The total contributions stand at \$98.

Since Gene Molter, WB2BAM works for the County of Monroe Office of Public Information, he has volunteered to do some public relations for the club. He issued a news release last month describing recent public service activities of RaRa. The article will hopefully show up in local newspapers and some amateur publications.

Last month's auction was a terrific success for everybody. The club made \$126.85. The record in sales shows there must have been a lot of satisfied buyers and sellers. (Apparently the show next door didn't detract too much.) The club treasurer, Len Gessin, WA2ZNC, reports he will need a helper next year during the auction. From the many comments and good attendance, the facilities were well liked. Bu Young, WA2UGE, Membership Chairman and Helen Smith, WA2YRH, reported brisk activity in membership renewals.

In the area of national news, there are two items of general interest I would like to mention. According to HR Report of November 14th, Representative Vanik's anti-RFI bill, HR 7052 is before the House Subcommittee on Communications and now is the time to show support to your Congressmen and Senators. The bill will empower the FCC to set and enforce RFI susceptibility standards in all home entertainment products. Enactment of this bill is a long over due and just an answer to RFI problems from properly-operated amateur stations.

Secondly, you can benefit the club and yourself by starting or renewing your ARRL membership through the club Membership Chairman. Every application earns \$1 for the club and you can save a \$1 per year for extended memberships or renewals.

That's all for now. See you at the meeting Friday.

DRAKE R-4B receiver. Covers 1.5 to 30 mH in 15 (plug-in-xtal) 500kHz segments. "Pass band" tuning with 4 discrete audio bandwidths. Crystal calibrator (25kHz). Notch filter. Automatic noise blander. ssb/cw/am modes. Instrument manual. Slow/fast AVC. "S"-meter. Mint condition, \$330. Jim Horwitz, WA2LEQ, 442-2045 (evenings).

# A REMARKABLE COINCIDENCE

by Bruce Kelley, W2ICE  
Club Historian

The Antique Wireless Association Museum in East Bloomfield this past season played host to nearly three thousand visitors from thirty-four states and such faraway places as New Zealand and Paris, France.

One of the last groups to visit the radio museum was one from the Victor Central Junior High School. Following the usual briefing and demonstrations, the students were left on their own to explore and examine the equipment.

Almost immediately a young lady exclaimed, "That's my grandfather over there in that picture!" She was indicating a large picture of a group of engineers inside the old 50 Kw WHAM transmitter building. With her finger pointing out John Long, W8ABX, Chief Engineer of the station, she proudly told me her name was Susan Long. Both the students and the teacher were greatly interested to learn that Susan's grandfather had been a well known and highly respected radio engineer and amateur in the Rochester area.

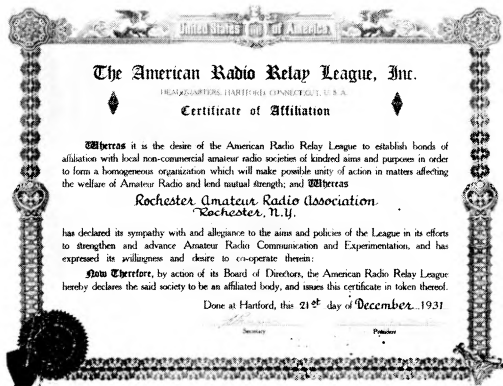
Before long a concerned young man who had been scrutinizing the photograph asked, "Why isn't my grandfather in the picture, too?" Thinking to humor him, I inquired his grandfather's name. The reply, "Kenneth Gardner!"

This was, of course, the second surprise, for here was the grandson of the Chief Engineer who later succeeded John Long. I explained to the young man, Michael Keefe, that his grandfather was not in the picture because the group consisted of transmitter personnel only, and that Mr. Gardner was in another picture of studio engineers. It appears that until this time neither student was aware of the other grandparent's affiliation with WHAM.

And why is this of interest to RaRa members? The coincidence is that John Long and Ken Gardner, W2BGN, (ex-8BGN) were among the founders of RaRa, and John was the FIRST President and Ken the FIRST Secretary, nearly forty-five years ago in 1931!



Susan Long, Bruce Kelley, W2ICE, Michael Keefe at Museum.



Certificate of Affiliation issued to RaRa in 1931 signed by Hiram Percy Maximus, A. R. R. L. founder.

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# FM NEWS and Views

by R. Gary Hendrickson, W3DTN  
(from November '75 Auto Call)

The recent episode wherein a mis-guided CB operator appeared on a local repeater with a mis-appropriated 2 meter FM transceiver presents some unique problems to amateurs that will, no doubt, re-appear from time to time. If the group on frequency has no capability of tracking down the offending station, it is probably best to TOTALLY ignore him. However, if means are available to attempt locating the station, they should be implemented immediately.

The ultimate goal in locating the offending station is two-fold: First is the desire of permanently terminate the offending transmissions. The second goal is to retrieve the equipment from any non-licensed operator and return it to the owner. Several precautions must be observed when undertaking a "track down and retrieve" mission. 1. You don't want to scare the operator away, or he just might take his "useless radio and throw it into the river - gone forever. 2. All coordination, when tracking him down, should be kept completely off the air. There is no way of knowing what other frequencies he may be listening to. Use the telephone or other means to coordinate your efforts. 3. Immediately notify the nearest FCC field office or monitoring station of the problem and keep them posted on developments. If the problem gets cured, advise them. 4. Be extremely careful if you locate the source of the transmissions and wish to meet the operator face to face. There is no predicting what kind of kook he may be. It is recommended that you contact the local police authorities and request their assistance. 5. Do not discuss the problem or the solution on the air afterwards. People can learn by overhearing our conversations that we have the capability of tracking down illegal stations. This is an easy way of scaring them into throwing the radio away.

This discussion brings up two important points. First, many amateur VHF FM radios look just like CB sets. CB rigs are currently the hottest item with auto thieves - in Washington, D.C. alone, some 60 to 70 CB sets are ripped off every day! Take appropriate precautions with your equipment! Second, all groups should have an active and effective DF'ing capability. This type of incident will recur. Let's be prepared for it.

# K2JD/Mobile Activities

by Gene Molter, WB2BAM

On Sunday, October 12, members of RaRa once again participated with members of RRRRA in a noteworthy public service event. In this case, a sports car rally. "Rally for Triumph" sponsored by the Triumph Touring Club of Rochester and the Kidney Foundation.

RaRa and RRRRA members provided support communications for the entire rally by relaying scores from the various checkpoints along the route back to the finishing line and by handling any emergency traffic which arose. As usual, another fine business job by those who worked. Participants were: (in photo from left to right) Neil Gibson; Richard Van Zandt; Norm Schroeder, WB2GGM; Mark Seager; Tom Perry, WN2UTM; Cary Holdsworth; Dave Hassett, K2SQT; John Oleksyn; Rich Koehn, WB2SNA; Roger Harnaart, WB2BWQ; and Ed Holdsworth, WA2EKR. Not included in the foto but participating were: Bill Henry, K2VBK; Charlie Mills, K2DLU; Larry Brassie, WA2GHQ; and Dick Jank, WB2EEU.



HEATHKIT TX-1 Apache transmitter with SB-10 ssb adapter, both in good condition. \$110 or best offer. Jonathan Thomson, WA2BJE, 247-3395.

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FOR SALE - w meter station consisting of transceiver, base beam and Hustler mobile antenna. Gene Molter, WB2BAM, 342-6321.

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# RRRA NOTES

by Ronald J. Jakubowski, W2HXP

A question that comes up on the air, at meetings, at Don and Bob's or Lums at least once a week is how to interface a tone pad to a 2-meter rig. There has been much written on the subject, but unfortunately what has been published is either not in the hands of those who need it or cannot be understood by them.

The most important and sometimes most difficult task is to find out which wires on the tone pad need to be connected. Figure 3 shows wiring interconnections for the most common Western Electric and Automatic Electric pads. However, if you have another make or a newer AE or WE pad, it is best to consult a wiring diagram if one is available (John Schooley, W2BLU, has access to some of this information if given a model number to work with). Even if you are reasonably sure that you know which wires are which, use an ohmmeter to make certain. The pad electronics will exhibit approximately 1K - 2K resistance when a button is pushed if the ohmmeter polarity is correct. Once the proper connections are found, you must determine the best way to supply voltage and pick off audio.

Figure 1 shows the easiest way to feed a high impedance microphone circuit that uses a dynamic, crystal or ceramic microphone. Component values are not critical, but I would recommend staying within 20% of the values shown. Since current (approx 10 ma.) is drawn from the battery only when a button is pushed, the battery will last close to its shelf life.

If you have a radio that uses a carbon microphone (voltage present at the microphone terminals), your interface job is much easier (Figure 2). You can connect the pad directly across the microphone input terminals, provided that the microphone element is not in the circuit when a button is pushed. Most microphones disconnect the microphone element when the PTT switch is open anyways, so all that is needed is another means of actuating the PTT circuit.

Actuating the PTT circuitry on the transceiver when the tone pad is in use is another problem in itself which I will address in next month's column.

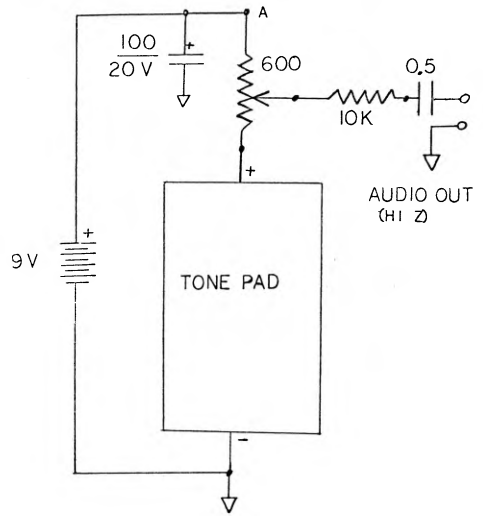


FIGURE 1

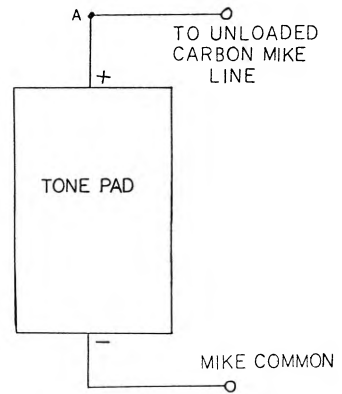


FIGURE 2

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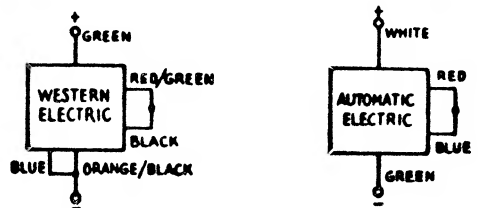


FIGURE 3

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