

SPECIAL HAMFEST ISSUE

CROSSTALK

Published By And For The

* GLOUCESTER COUNTY AMATEUR RADIO CLUB, W2MMD *

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August, 1981

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Club Nets

2 Meter RTTY Net: Thursday, 8:00 PM, 147.54
ARES Net: Sunday, 8:00 PM, 147.78/18

The Gloucester County Amateur Radio Club meets the first Wednesday of each month at the American Legion Hall in Franklinville. Meetings begin promptly at 8:00 PM.

Please send any contributions for CROSSTALK to Doug Gehring, WA2NPD,

*Trustee of Club Call - W2MMD
Rose Ellen Bills - N2RE

CO-EDITORS FOR THIS ISSUE:

DOUG GEHRING, WA2NPD
ROSE ELLEN BILLS, N2RE

WELCOME

Welcome to Gloucester County Amateur Radio Club's annual Hamfest. Our Club has worked long and hard on this event and we hope you will enjoy yourself today.

This is a special issue of CROSSTALK, our Club monthly magazine. We hope to give you an idea of what G.C.A.R.C. is and has been working on this year.

On the following pages are articles to inform you about our Club. If you have any questions---just ask any of the members you will see around the grounds--we can be identified by our club badge of blue lettering on a yellow background.

This Club has been enjoying 22 years of amateur radio fellowship and our current membership is approximately 145.

We welcome anyone interested to come to a meeting, the first Wednesday of the month at the American Legion Hall in Franklinville on the Delsea Drive.

COME AND SEE HOW MUCH
FUN AMATEUR RADIO CAN BE
AT G.C.A.R.C.

FOR YOUR INFORMATION WE ARE LISTING THE PRESIDENTS OF
GLOUCESTER COUNTY AMATEUR RADIO CLUB, INC, ALONG WITH THE
YEAR IN WHICH THEY SERVED IN THIS CAPACITY:

- * 1959 - Van Turner - W2KE
- 1960 - Woody Frantz - K2AQL
- 1961 - Jim Peck - W2LVW
- * 1962 - Jan. thru March - George Stuart - K2SOL
- * 1962 - Apr. thru December - Mal Mason W2MMD
- 1963 - Milt Goldman - K3WIL
- * 1964 - Paul Walton - W2YNR
- 1965 - Jack Layton - K2JKA
- 1966 - Gurdon Cooper - W2PAX
- 1967 - Doug Gehring - WA2NPD
- 1968 - Jack Bowen - WB2WKV
- 1969 - Bill Bachman - WA2VEE
- 1970 - Jan. thru Feb. - Paul Callaghan - WB2WAK
- 1970 - Mar. thru December - Ken Newman - W2FBF (N2CQ)
- 1971 - Bill Frambes - WB2FJE
- 1972 - John Stull - WB2JZX (N2SI)
- 1973 - Wayne Wood - W2SUA
- 1974 - Jack White - WA2MEM
- 1975 - Jan. thru August - Doug Gehring - WA2NPD
- 1975 - Sept. thru December - Rich Netherby - WB2OCR
- 1976 - Rich Netherby - WB2OCR
- 1977 - Herb Schuler - K2HPV
- 1978 - Ray Metzger - WB2BZY (AI2B)
- 1979 - Ray Martin - WB2LNR
- 1980 - Rose Ellen Bills - N2RE
- 1981 - Tom Widener - KE2M

* Silent Key

(Current Call)

ANTENNAS PART III, by K2JF

You have now read about the beam gain and the VHF/UHF antennas. One of the prime considerations for VHF/UHF antennas was the higher-the-better. For HF antennas that statement is not necessarily so.

One of the more important criteria for antenna performance is antenna location. A famous statement by a famous DX operator once said, "It is better to have a low-gain antenna high up, than to have a high-gain antenna low down." Well, you say, I guess I want to find a nice big hill, put up a 100 ft. tower and put my beams up there and string my 40 and 80 meter antennas from tower to tower - - Well:- not really, first the hill top antenna location will be in line-of-sight with all the other antennas around you and you will get the ground-wave from the other guy's transmitters. This can give you front end overload, receiver blocking, cross-modulation and other mixing. Now you have not considered the elements. If you are "UP ON A WINDY HILL" you must expect to face mother nature with all of her beauty and violence.

OK, now you tell us that "the higher-the-better" is not necessarily the best; so what do we want?

One of the most important considerations is that your antenna has a clear shot to the horizon. What you want is relatively flat ground, if possible away from line noise and man-made QRM.

For spacing from objects there is a general rule of thumb. UP - minimum height. At least a quarter wave length above ground. SURROUNDING OBJECTS - a minimum of three and a half wave lengths from the nearest object. Well, that's nice, but where do you get those conditions; and, how about mountain shadow? We all cannot be lucky and live out in the wilds of Colorado (HI BOB). Mountain shadow can be used FOR YOU as well as against you. By doing a little bit of geometry you can locate your antenna whereby the slope of the mountain can act as a reflector; on the other hand, if you get at least three and one-half wave lengths away, the shadow effect will tend to disappear.

One of the most important areas of antenna performance is ground loss. Ground loss is important on the 40, 80 and 160 bands. At elevations below the quarter-wave criterium the radiation resistance of a typical antenna departs from the theoretical level by a large amount. At an elevation of 0.1 wavelength on 80 meters [about 25 feet high], the radiation resistance of a dipole is about 21 ohms. (How do I feed it with my 50 ohm coax? - - Use a tuner). So ground loss is important. Many "old-timers" used counterpoise wire to help their antenna problem. Do you live where you have buried cables [telephone, house wiring, cable TV]? Good, they will help as ground wires; however, sewer pipes and plumbing, the iron, copper pipe [with water in pipes] works well. Can you lay a lawn of wire mesh? If so good, if you cannot put down a mesh, a single ground reflector wire will work wonders. It can be placed under, on top of, or 1 to 2 feet above the natural ground directly under your horizontal antenna. You will be amazed at how much better your antenna will perform by the addition of that one wire.

For the vertical antenna the RF ground currents are very important. The RF current is the current returning to the antenna through the ground; it is generated by the radiating field. Ground resistance dissipates a proportion of the transmitter power which is not radiated; therefore, it is very important that a well grounded mesh or radial system be used with vertical antenna.

Now if you are an avid DX hound, a higher-the-better antenna system is for you. The radiating angle will be small; hence, the reflective index from the ionosphere will be such that great distance will be covered; however, for this goodie, you loose close-in due to the "skip-zone". Look at it this way - - - Put a mirror upon the ceiling. Now take a flashlight and shine it up at the mirror. If you put the beam up almost vertically you will notice that the reflected spot comes back near you. The angle of reflection equals the angle of incidence. Now shine the beam at a low angle from the ceiling and notice that the spot has moved pretty far away from you. Replace the mirror with the ionosphere and your flashlight beam with an RF signal from your beam antenna. The farther you can go out before you strike the ionosphere the farther your signal will go, therefore: unless you are into DX, the higher-the-better is not necessarily so. Especially if you want to do traffic handling, rag-chewing and contest work, which many many amateurs do. The recommendation for the average amateur -- minimum tower height for 20, 15 and 10 is about 40 feet, and optimum height for GENERAL DX is 60 to 70 feet. For the other end of the spectrum for the horizontal antenna, 20 to 50 feet high works out very well.

In conclusion then, if you are going to do general all band operation, your low band antennas should be strung between your tower and mast or another tie point that makes your antenna horizontal and should be between 20 to 50 feet off the ground. And if you can put a wire under the antenna and ground that wire at both ends with 8 to 16 foot rods, all the better. Put rock-salt in or around the ground rods, and keep them wet. For your higher bands, put up a 40 foot tower and go. Remember for VHF/UHF the higher-the-better.

Sometime later, we will discuss LONG WIRE, VEE, RHOMBICS, BEVERAGE, AND SLOPER antennas, their good and bad.

Remember: *"A man has to live with himself and he should see to it that he always has good company" - Charles Evans Hughes*

Ed. Note: Although this is PART III of a series of articles, it was felt that sufficient stand-alone information was contained herein to interest the typical HAMFEST attendee.

GCARC, A CLUB FOR ALL HAMS

Thank you for attending our ANNUAL HAMFEST-1981. It is our pleasure to have you join us and we are sure you will learn more of our Club as you read over this HAMFEST ISSUE OF CROSSTALK.

We take this opportunity to give you a brief summary of some of the things we are doing for the ham fraternity. If you find you want more information, ask any of our members you see around the grounds.

Just a little of our club history will tell you we were first organized in 1959 and incorporated in the State of New Jersey as a non-profit organization. Several charter members are still active members in our Club. Most of our past presidents are still active members in our Club.

From our beginning in 1959 we have had a record of continuous activities, with regular meetings and other Club activities. Though we are not a large club, if you will look through the pages of QST you will find our records in most ARRL events. You will also find that we have participated nearly every year in most ARRL sponsored operating events. (We have been an ARRL affiliated club since our inception).

Every year we participate in the Field Day event, and through our Contest Committee, sponsor activities connected with the DX contest, ARRL Sweepstakes and the VHF Sweepstakes, not to mention the Novice Roundup and various other contests. Our Club has for many years sponsored an Amateur Radio Emergency Corps and has supplied the nucleus of personnel for the Civil Defense-R.A.C.E.S. program in Gloucester County.

In the past, Club members have put on Amateur Radio demonstrations at various schools and service organizations, as well as providing communications for various Police Departments during the Halloween season. On occasion we have helped with annual clothing drives for Goodwill Industries of Southern New Jersey and have provided communications during Bike-A-Thon and Walk-A-Thon fund raisings for several causes.

We have had a float in Woodbury's annual Halloween parade, and have put on exhibits at the 4-H Fair and participated in Amateur Radio Week in Gloucester County.

On several occasions, our Presidents have given talks regarding our Club and Amateur Radio to civic and other organizations. Our Club has a Speaker's Bureau of the following:

AE2L - Joshua J. Brehm - Chairman
N2RE - Rose Ellen Bills
K2JF - John Fisher
WB2FJE - William A. Frambes
WA2NPD - Douglas G. Gehring
N2AKL - Roslyn Marder
WA2USI - Charles A. Naylor
WB2OCR - Richard J. Netherby
K2HPV - Herbert L. Schuler
KE2M - Thomas Widener

We provide fraternity and friendship for our members. As our members are from all walks of life including medical doctors, lawyers, ministers, chemists, nurses, secretaries and even household engineers, it would not be long before you would soon become acquainted with those of mutual interest to you. We supply Club QSL cards, at cost, to our members. Our Club member identification badges are unique in that they show our CLUB EMBLEM as well as name and call of the member and use our official club colors - [gold and blue]. We have distinctive Club jackets and decals for your cap and/or shack, along with patches for jacket and/or cap.

We are sincerely interested in helping you get the most out of Ham radio and feel we can do this best by having you join our Club. Our meetings are held the first Wednesday of each month at the American Legion Hall, Franklinville, N.J. at 8:00 pm. If you have a problem with directions you can get help on 2-Meters as a majority of our members are in QSO en route to Club meetings and will be happy to direct you to Delsea Drive in Franklinville. We look forward to seeing you at one of our meetings in the not too distant future.

There are two classes of membership available; the Associate Membership for non-amateurs or persons not able to actively participate in the Club; and Full Membership for licensed amateurs.

One of the most important features at our Club Meetings is the House Committee. The job of the House Committee is to make the Club members feel at home at all our meetings. We provide doughnuts and coffee to everyone at each meeting and ask for a small donation from you. Also, at the end of each meeting the hall is cleaned up by this committee. Like most jobs of this type--it is more noticeable when it does not get done. We are fortunate to have Jim Bray-N2AKI who does a fb job as Chairman of our House Committee.

You are probably thinking about this time - gosh! I bet the dues are high in this club! Actually our dues are very low key as compared to several other clubs in the area. The cost for Associate membership is a \$1.00 initiation fee plus \$5.00 per year. For Full Membership a \$3.00 initiation fee plus \$7.50 per year dues is required. Prior to acceptance -- all members are reviewed by our Board of Directors during their meetings. All members are accepted and given a packet including our membership list and a copy of our Constitution and by-laws during our regular CLUB meeting.

Sound interesting? Check the hospitality table -- you will find application blanks to fill in. You may attend any meeting as our guest prior to acceptance. Like the airlines say "Come on Down You'all" and see what an interesting evening you will have.

We feel our major assets are a mixture of people in all walks of life coming together in a common bond of enjoying all phases of amateur radio, regardless of your license class.

Try us.

OUR HAMFEST CHAIRMAN -- HARRY JACKSON-WB2GSF WOULD LOVE TO HAVE YOU LOOK HIM UP TODAY AND TELL HIM YOU ENJOYED THE HAMFEST. HE HAS DONE A FINE JOB IN OVERSEEING ALL THE DETAILS FOR YOUR DAY OF RELAXATION.

SOME GCARC FACTS

In 1959 we organized and called ourselves GLOUCESTER COUNTY AMATEUR RADIO CLUB. We became affiliated with ARRL and named the Mantua National Bank to be used for Club depository. Our very first FIELD DAY was June 27, 1959. We became GLOUCESTER COUNTY AMATEUR RADIO CLUB, INC. April 14, 1960. That year we established our official Club emblem and colors of blue and gold, initiated Club Certificates and our Club nets. Our first HAMFEST was September 8, 1960.

Our affiliation with Delaware Valley Council of radio clubs started in 1961. We also established an annual audit of the Treasurer's Records to be done by a Club Trustee and the findings reported at the November meeting. Our Code Classes for the General Ticket started in 1962. We had another HAMFEST at the Algonquin Club on August 12, 1962. That year we also held a Club PICNIC at Lake Garrison in lieu of our July meeting.

Our 1963 HAMFEST was held at Crystal Birch Lake. We issued our first Club DX Award that year. We started mailing CROSSTALK to all members. It was 1963 that we initiated our nominating committee to be composed of all past presidents with the current president acting as Chairman to hold a meeting during the month of October and the slate to be presented at the November meeting. The Postal Department issued a stamp commemorating ham radio in 1964. That year we decided the four Trustees should appoint a Chairman, meet and account for all Club property. The Chairman would then report their findings to the Board of Directors at the May Board meeting.

We held Amateur Radio Week May 17, 1976. In 1966 we were offered the third floor of Pitman Boro Hall for our meetings without charge. In 1969 we initiated our President's Plaque and started our Silent Key Plaque. A write-up which included a picture of WA2NPD, the 1975 President, at the key on FIELD DAY, was printed in the Gloucester Times. We had a station in operation for Amateur Radio Week at the Collegetown Shopping Center and a story was also printed in the Times.

During 1976 a Club PICNIC replaced a July meeting. 20-meter contacts soon became a weekly Club get-together when WA2NPD accepted a transfer to Texas. We learned in 1977 that we lost the \$50.00 bond donated to the BARRC-76 Bicentennial in Philadelphia as they went in the hole for the project. We sponsored AMSAT OSCAR PHASE III Series. On May 7th we held 2-Meter Communications for the Explorer Scouts Canoe Ride. We appointed a Club Historian.

Our first Honorary Life Membership was presented in 1972 to VAN TURNER-W2KE, our Club Founder and our second Honorary Life Membership was issued February, 1978 to Charter Member DELLA M. PARKER-W2AFZ. The 1959 financial records were placed with the Historian and it was established the records would only be kept with the Treasurer for six years.

In 1980 our first YL President Rose Ellen Bills-N2RE presided. We made a contribution of \$100.00 in 1980 to the Randy Bynum-WB2SZK TVI/RFI problem. We provided 2-Meter Communications for a Bike-A-Thon benefit for the Mentally Retarded in 1980. We had members take part in a Bike-A-Thon from Philadelphia to Atlantic City where 2-Meter communications were covered during 1980 and 1981. W2YC won the 40 WPM CW contest at Dayton in 1980.