

C R O S S T A L K

Published For and By The
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	Milt Goldman, K3WIL	Publisher	

AREA NETS

GCARC RTTY NET Tuesday, 8:00 PM 147.78/18 Rptr
ARES NET: Sunday, 8:00 PM 147.78/18 Rptr
Del. Valley Regional Emer. Net Sunday, 8:30 PM 224.66 Rptr
Club Repeaters: 147.78/.18, 223.06/224.66, 447.10/442.10

The Gloucester County Amateur Radio Club Meets the first Wednesday, of each month at the V.F.W. Hall in Woodbury Heights. Meetings begin promptly at 8:00 PM.

Please send contributions for CROSSTALK to Tony Starr, WS2FZB,

Deadline for submissions is ten (10) days before Club Meetings.

PRESIDENT'S MESSAGE - JUNE 1985

The year is moving very quickly. I can't believe that it is the end of May already! Three club events have taken place and we have more on the way. We have the horse show on June 8th and 9th. We can use help on this, and Field Day which is coming up. Jim, KA2OSV, needs volunteers. We also need to get something going with the club's Mega-point award. I would like to thank Walt for his event on Scout Day and all the people who assisted him. I also would like the club's opinion on what you would like to hear at the program part of the club meeting. Chick, WA2USI, is having a problem getting a program together and is open to your suggestions.

I would like to take this opportunity to thank all of you who supported me and my board on the difficult decision we had to make last month. It is nice to know I can count on you!

Pres. Tom Gordon
KB2GI

JUNE PROGRAM

Program Chairman and Vice President, Chick, WA2USI has informed us that this month's program will be on SKYWARN. In case you aren't aware of it, Skywarn is an Amateur Radio Network which operates in cooperation with the National Weather Service to track dangerous weather patterns, mostly during the warm severe-thunderstorm season. This will be a highly informative and educational program, so try to make it to the June meeting.

HIGHLIGHTS - Board of Directors Meeting

The monthly meeting of the Board was held on May 15, 1985 at the home of Harry, WB2GSF. Present were Tom, KB2GI; Chris, KC2PC; Chick, WA2USI; Tony, WA2FZB; Chuck, WA2TML; Bill, N2BK; and guest member Ginny Martin, N2FJM. The meeting was called to order by President Gordon at approximately 7:30 PM. The minutes of the previous meeting and the treasurer's report were read and approved.

CORRESPONDENCE: Letters were sent to the Tabernacle Repeater group and the Shore Points Amateur Radio Club asking their assistance in the American Cancer Society Bike-a-thon.

MEMBERSHIP: Two new members were voted in by the club's officers. They are Warren Bacon, NC2W; and Ted Keiffer, N2EBB.

IRS SNAFU: Two letters were received from the IRS. The first one asked the club to submit financial reports for fiscal years 1983 and 1984. The second letter asked the club to sign, date, and title an application form, due to there being no record of this form in the original file. Bill, N2BK, will supply the proper records to the accountant to do the financial reports. (Some day we may resolve this headache - Ed.)

RFI: John, K2JF, reported that an RF Leakage Detecting Receiver had been borrowed from one of the cable TV companies to track down and verify complaints of excessive leakage by three individuals in the area. The measurements taken verified excessive leakage in all three cases, and letters were sent to the appropriate cable companies, and the FCC offices in Philadelphia and Washington, D.C; with copies going to the SCM, the Division Director, and to the three individuals.

In each case, the cable company involved attempted to correct the problem, with varying degrees of effectiveness. John, said the FCC would be coming to investigate.

VEC TESTING: John, K2JF, reported that after the Hamfest in August, the club's VE Team will discontinue testing and disband. The testing will be picked up by the Bellmawr group, SJRA, and by Tom and Mary Petruzzi.

HAMFEST: Plans are coming along well, reported Ginny, N2FJM. The fliers should be ready by the June meeting. Tickets this year will be \$2.50 in advance; \$3.00 at the gate; and \$3.50 for tailgating. The prizes will be a Commodore 64 and a Kenwood TS-430s. Ginny announced the next Hamfest Committee meeting, scheduled for June 12, at her house.

REPEATER: Chuck, WA2TML, reported that new software will soon be received for the repeater controller. One new feature will be digital voice-message recording. It was recorded in the minutes that the club thanks Ray, WB2LNR, for donating a rack-type enclosure for the repeater.

FIELD DAY: Jim, KA2OSV, needed to buy some items for the club's crank-up mast, including guy rope, an American flag, and some large stakes. It was thought that the club may already own a flag. Approval would be given for the rope, and prices would be obtained for the stakes. There was some discussion as to alternate sources of the rope and substitution of steel re-rod for the stakes.

NEW BUSINESS: During the Sunday ARES net, Chick, WA2USI got only 5 Volunteers for the ACS Bike-a-thon. We need more help.

The Underwood Memorial Hospital Horse Show is covered; with 2 operators in the morning, and 2 in the afternoon of each of the 2 days.

The Pitman 4th of July Parade will be needing 10 operators. The operators will be using HT's and the parade will run from 9AM to 12 Noon.

There being no further business, the meeting was adjourned at 10 PM.

From "The Minutes", thanks to
Jim McDonald, WB2AOL

HAMFEST COMMITTEE MEETING

As mentioned previously, the next meeting will be held at the N2FJM/WB2LNR residence. Contact Ginny for time and directions or if you are on the committee but can't attend. The date of the meeting is Wednesday, June 12.

ATTENTION CONTRIBUTORS!

If you will be contributing an article or feature to me for the JULY issue, please note that the press deadline falls on Field Day or June 23. Because of this, it will be necessary for me to prepare Crosstalk in advance, so I must request that you turn in your contribution one week early. Please make a note on your calendar to turn in your article before June 16 (Fathers' Day, of which this will be my first). Your co-operation will be greatly appreciated, and I again thank all of you regular contributors for making it easy for me to turn out a fine publication.

Your Editor,
Tony Starr, WA2FZB

FOR THE RECORD

In accordance with article 6, section 6, of the constitution, Russell Dean Stafford, WB3JVB, was expelled from membership in the Gloucester County Amateur Radio Club by a majority vote of the members present at the general meeting of May, 1985. (This announcement has been published by order of the President of GCARC.)

FIELD DAY UPDATE

We have very little time left to finalize our preparations for the operating event of the year. Chairman Jim Clark, KA2OSV, has been working feverishly to make sure this year's event turns out great. The ladies of the food committee have some great cooking in store for us. I cannot stress strongly enough what a truly enjoyable event Field Day is. If you are one of those unfortunate souls who have never had the pleasure of participating in the annual happening, you really owe it to yourself to come out and experience it. Set-up will begin around 9 AM on Saturday, June 22, at the old driving range of the Gloucester County College.

ATTENTION ALL BAND CHAIRMEN: The one and only meeting of the Field Day Committee will be held at the home of Jim Clark, KA2OSV, on Wednesday, June 12, at 8:00 PM. If you cannot attend, it is requested that you send your top operator to the meeting on your behalf. In either case, contact Jim at 962 - 7529 to tell him if you will attend.

VEC TESTING for Radio Amateur License, by the Gloucester County Amateur Radio Club's V.E. team will be held on:

DATE: Saturday, June 29, 1985
 TIME: 0930 to 1300 *NOTE CW tests will be given
 at 0930 and 1100
 PLACE: Glassboro State College - Westby Hall,
 Rt. 322, Glassboro, NJ

COST: \$4.00 in cash, money order, or certified check.
 EXAMS: Novice through Amateur Extra

No preregistration required --- Talk - in 147.78/18
 For further information please call K2JF

DA'S & DIT'S

W2MMD - Repeater. During Field Day delicious refreshments will be served by the young ladies of the Club.

AE2L will be leaving us in July for his new QTH in North Carolina.

WB2OZI is going to park his boat for two days so he can participate in Field Day.

As planned, WB2OZE and wife will be vacationing overseas next month

WA2FZB is our expert on the local bridges crossing the Delaware. If you have any "nuts and bolts" questions, he's the man to ask.

K2HPV and his better half collect aluminum cans while biking.

By this time N2FKT should have his "thirty day" question answered.

N2DJZ has a super radio station but the Roosters would like to know what happened to him.

WB2FJE is going to have a fun summer paddling his canoe in the surrounding lakes.

We have another husband and wife team - N2FNF and WA2TML.

After eight years off the air, WB2WPZ is back again. "Hello" - glad to have you aboard.

Is it true that W2HVW operated a trolley car in the springtime of his life?

"73"

de "The Eavesdropper".

THE AMERICAN RADIO RELAY LEAGUE, INC.



OFFICE OF THE EMERGENCY COORDINATOR

QST
OFFICIAL ORGAN

Back in the early 1960's shortly after the Gloucester County Amateur Radio Club came into existence, a small group of Hams got together and decided to form an Amateur Radio Emergency Corps group, and to start a net.

During that period of time the popular means of short range local communications was via 6 meter A.M. It was decided to use 50.9 MHz. as the net frequency, with 51.3 MHz. as an alternate or back-up frequency.

In its early days the net was quite successful and averaged between twenty and thirty check-ins each session.

When I became Emergency Coordinator in 1970, six meters was still the principle band used on the A.R.E.C. net. With two meter repeaters just starting to come into vogue.

Gradually the net lost its identity as an A.R.E.C. net when the A.R.R.L. changed its structuring and started to use Service instead of Corps.

Then along came the new Barnsboro Repeater on 147.78/.18 MHz. and we started to use this new mode on 2 meters along with the old 50.9 MHz. frequency on six meters.

In the years between the 60's and 70's the net managed to stay an important club function and net check-ins maintained a good average.

Recognition of the net by anyone except the Hams was not very great in the early years.

Around 1977 Chick, WA2USI, and I, at a group meeting of the net decided to try a new approach to make the net more widely recognizable. It was agreed that I would keep the records and Chick would take care of the repeater and try to drum up interest in A.R.E.S.

By this time 6 meters had disappeared from the net and 2 meters was the primary frequency.

In order to get some recognition Chick and I met with the Director of the Board of Chosen Freeholders of Gloucester County. At the meeting he promised to give us some backing. However we ran into opposition when we tried to get some cooperation from the State of New Jersey; the only way we could get to first base with the County and State was through establishing a program involving the A.R.E.S. net and the State run Radio Amateur Civil Emergency Service (R.A.C.E.S.).

In the years since 1978 Chick has done well in getting involved with other functions such as the J.C.'s Bike-A-Thon, Cancer Society Bike-A-Thon, and now this year the Underwood Hospital Horse Show. At the same time Harry, WB2GSF, has taken care of the March of Dimes Walk-A-Thon, and I really can't off hand recall who handled the Pitman Fourth of July parade.

Which all leads to the point I want to bring out. As the Gloucester County Amateur Radio Club has grown in size from 40 or 50 members in the 60's to its present 175 members today, growth of the A.R.E.S. has not kept pace.

We need more help with our projects that the people of Gloucester County have come to rely on. We need help, so if you can see your way clear, try tuning in to the net on Sunday evening.

Remember the club only meets once a month, the net meets every Sunday, so to keep abreast of whats going on join us on 147.18 at 8 P.M. Sunday.

LES BELLESA NEW JERSEY AMATEUR IN THE "TEACHER IN SPACE" PROGRAM

A New Jersey amateur has been chosen as one of 118 semi-finalists in the process of selecting the first teacher to go into space aboard the Space Shuttle.

Jeannine Duane, WB2MBW, was selected as one of two semi-finalists in New Jersey. Approximately 10,000 teachers submitted applications, and the candidates will be further narrowed down later this summer to 10 finalists, leading to the ultimate selection of one crewmember and a backup.

Applicants were asked to write 9 essays, and appear before a panel for an interview. They were asked to submit a proposed project for the shuttle flight, and Jeannine proposed an Amateur Radio in space project -- her primary function aboard the shuttle would be to communicate with school groups on the ground, and she would later deliver the QSL cards in person at schools around the country. Her project would differ from other ham-in-space projects in that rather than operating only when free time was available, she could operate a major portion of the flight.

We wish Jeannine luck in the selection process, and will report further news as it develops.

Above reported in ARRL Letter, Volume 4, Number 9 of April 25, 1985.

73

Rose Ellen Bills - N2RE

QSL HALL OF FAME

For our club silent keys, I propose the families read this article. This is a QSL Hall of Fame:

- Purpose ----- to preserve each amateur radio operator's creativity and ideas expressed in their QSLs.
- Goal One ----- To receive your personal QSLs
- Goal Two ----- To receive your incoming QSLs you have received
----- from other hams over the years while you are still living.
- Goal Three ----- To receive your incoming QSLs you have received
----- from other hams over the years after you have become a silent-key.
- Goal Four ----- To receive your logs and any unused QSLs so that
----- QSOs can still be confirmed after you have become a silent-key.

Send to: QSL HALL OF FAME
 K4CLA, Manager
 562 Oak Drive
 Lexington, S.C. 29072-9059

It would be nice to have all the GCARC members of our silent key list have their QSL card mailed to this Hall of Fame. I have forwarded the QSL of my OM-W2CDZ as well as many other QSLs of those QSLs I have received over the years who are also a silent key.

73

Rose Ellen Bills - N2RE

ANTENNA TOPICS

Summer is here and now is the time for people to start their yearly Antenna chores. In New Jersey we at times do get some real fine windy conditions, especially when we get some of those "thunder-bumpers." In some of these storms we can get winds as high as 50 mph and gusts to 60 or even higher so it may be of interest to some of you who have various types of antennas to take a look at what wind can do.

Preparing for a predictable wind, I simply mean that you should always park your antenna so that it presents the least possible wind loading to the expected wind. If the weather man says to expect a south wind then point your antenna so that it's least surface area is to the north and south.

The wind loading of an antenna is easy to calculate if you know its dimensions. The rule is that the effective surface area of a cylinder (A yagi boom or element) is equal to the projected area times 0.66. Therefore if your antenna has a 24 foot long boom which is 2 inches in diameter the effective surface area is 24 times .0166 times 0.66 or 2.645 square feet. (The 0.166 factor is 2 inches converted to feet.)

The elements are a bit more complicated because they are not a constant diameter. First, find the effective surface area of each section of the driven element using the same technique as the boom. Convert the diameter and length of each section to feet then multiply. You can also do the calculation using inches but you must then divide your answer by 144, the number of square inches in a square foot. Once the effective surface area of each section of the driven element is known sum them together to find the total effective surface area for that element.

If you are calculating the area of a beam with an odd number of elements then the total area of all the elements combined is approximately x times that of the driven element, when x is the number of elements. The reflector and directors will average out to be approximately equal to the driven element for head-on winds. If you are cal-

culating the area of a beam with an even number of elements you will need to calculate the effective surface of area of both the driven element and the first director. Average these two areas by adding them together and dividing by 2. Then multiply the average by the number of elements. This gives you the combined effective surface area for all the elements.

Let us assume that a typical element's effective surface area is 1.5 square feet (typical for a 20 meter element). Four times this, for a four element beam, gives 6 square feet for the elements alone. Quite a bit more than 2.64 square feet of boom. Thus the moral of this story is to always place the broadside (boom) of your antenna to the direction from which you expect the wind to come. Of course we have made some simplifying assumptions here but this will give you a good rule of thumb to follow when those winds come roaring in like a lion.

TNX K5NW/K2JF

JUNE 22 is DAY ONE FOR 24 MHz

The 24 MHz or 12 Meter band will be released to U.S. amateurs at 0001 UTC on June 22, 1985. The 10 MHz or 30 meter band becomes permanent at the same time.

The ARRL Board policy of no contest credit or awards on the WARC bands will apply to Field Day, unless a decision is reached to the contrary at the Executive Committee meeting on May 18. Watch WLAW bulletins and the ARRL Letter for late-breaking news.

Full power (1500 Watts P.E.P. output) will be permitted on the 24 MHz band, 24.890 to 24.990 MHz. The subband 24.890 to 24.930 MHz is limited to CW and RTTY only. In the subband from 24.930 to 24.990 MHz, CW, phone, FAX, and SSTV will be permitted. On the 10 MHz band, (10.1 to 10.15 MHz), power continues to be limited to 200 Watts P.E.P. output, and CW and RTTY are the only modes allowed. For details on the mode subband allocations, see the Happenings column in December 1984 QST.

On April 26, 1985, the FCC released the First Report and Order in PR Docket 84-960. In addition to the 24 and 10 MHz allocations, the Order grants the ARRL request for a modification to Section 97.112 of the Amateur Rules. That Section presently provides an exemption so that operators may be paid to operate an amateur station transmitting bulletins and code practice on all medium and high frequency bands, and if the station is on the air at least 40 hours per week. ARRL requested that this be amended to read "at least six" HF and MF bands. ARRL claimed that the addition of the new WARC HF bands created a significant burden with respect to the League's obligation to transmit code practice and bulletins via WLAW on "all" HF bands. FCC agreed that this amendment was warranted.

The 420 to 430 and 902 to 928 MHz allocation matters proposed in Docket 84-960 will be dealt with in a further Report and Order at a later date.

Please remember that amateurs operating in these new bands must avoid interference to the Fixed Service outside the U.S. The effective date of the Order is June 22, 1985.

COMING SOON -- NEW OPERATING MANUAL!

The completely updated and revised second edition of the popular ARRL Operating Manual has just gone to press, and books will be hitting the streets in early June. Covering everything from DXing to digital, from shortwave listening to satellites, the Operating Manual is your source for contemporary, how-to-do-it operating techniques. The first edition was totally sold out, so don't delay in getting your new copy. Among other things, this new edition provides nuts-and-bolts advice on contesting, DXing, net controlling, talking to OSCAR, gearing up for state-of-the-art RTTY, autopatch and phonepatch guidelines, and much more.

This publication also includes never before published information such as 160-meter frequency allocations around the world, international WARC band (10/18/24 MHz) frequency allocations, international voltage/current requirements by country, and application materials for the Worked All States and Worked All Continents awards. This is just a small sample of what awaits readers of the new Operating Manual. Individual copies are \$5.00 (\$5.50 outside the U.S.), plus \$1.00 postage and handling. See June QST, page 116, for particulars.

AMSAT-OSCAR 10 ON FIELD DAY

The AMSAT-OSCAR 10 satellite will be in Mode B (430 MHz uplink, 2 meter downlink) for the entire Field Day period. OSCAR contacts earn your group 100 bonus points and are essentially a "free band" -- the satellite equipment does not increase your transmitter count.

These items TNX to "The ARRL Letter" and K2JF

LAND MOBILE GETS 421-430 MHz in three cities

With only the vaguest rumors preceding the official word, FCC has issued a Notice of Proposed Rulemaking in General Docket 85-113 which would amend Part 2 making Land Mobile a primary service in 421-430 MHz in Detroit, Cleveland and Buffalo. The three cities have less Land Mobile space allocated to them than most cities their size because of their proximity to Canada and complexities of the sharing arrangements involving former TV channels. Amateur use of these frequencies near these cities already is slated to be on a case-by-case basis after adoption of rules proposed in PR Docket 84-960. The worldwide primary allocation of the frequencies, and the plan in effect in Canada, is to the Fixed and Mobile Services. Amateurs above Line A, roughly 75 miles

from Canada on average, will be able to operate in 420-430 MHz only after coordination with Canada.

Amateurs in some additional areas near Cleveland and Buffalo north of Line A will have to avoid interference both to Canadian and to American Land Mobile Services if Docket 85-113 is adopted as proposed. Land Mobile stations in the following counties would become eligible to use some of the 421-430 MHz frequencies: Macomb, Oakland and Wayne Counties, Michigan; Lorain, Medina, Summit, Geauga, Lake and Cuyahoga Counties, Ohio; and Earle and Niagara Counties, New York. Important note: even adoption of the rules proposed in Docket 85-113 doesn't mandate immediate change, however. There must still be separate rule-making in Parts 22 and 90 before Land Mobile can start applying from frequencies. Amateurs should study the actual text of the NPRM carefully before filing comments, since the issue is inherently complicated. Comments may be filed until May 28 and Reply Comments before June 12.

TNX to "THE ARRL LETTER"
and K2JF