

C R O S T A L K
 O S T A L K
 C R O S T A L K

STAFF

Editor: Wally Martin, W2PLD
 Scuttlebutt: Doug Gehring, WA2NPD
 Technical: Woody Frantz, K2AQV
 Program: Bill Bachman, WA2VEE
 Traffic: Bill Frambes, WB2FJE
 Members: Della Parker, W2AFZ
 Correspond: Della Parker, W2AFZ

* * * * *

MEETINGS ARE HELD THE FIRST WEDNESDAY OF EACH MONTH IN THE PITMAN BOROUGH HALL, 3RD FLOOR, NORTH BROADWAY, PITMAN, NEW JERSEY.

* * * * *

All material for publication in this paper should be in my hands during the first week of the month preceeding publication. Emergency deadline is the third Friday preceeding publication.

* * * * *

CROSSTALK is a club paper of the GLOUCESTER COUNTY AMATEUR RADIO CLUB published monthly for it's members. Owing to the extensive coverage of this paper, paid advertisements from outside personnel will be accepted according to the rates set up by the club.

* * * * *

It is the aim of the staff to get this paper into your hands prior to the monthly meetings, in order that you are better informed as to the club's business.

JUNE 1968

EXTRA SPECIAL NOTICE FLASH.....

There will be no meeting in the Club Room for July, instead the annual picnic of the G.C.A.R.C. will be held on Saturday, July 13, 1968 at Lake Garrison, starting at 9:00 A.M. Picnic will be held rain or shine. To help defray the expenses of the picnic, an admission charge of \$1.00 per family is in effect.

Tickets may be purchased from the Committee consisting of the following: WB2BVW Bill Farr, WB2BVV Darrell Neron, WB2GKH John Kull.....or tickets may be purchased at the entrance of the Lake grounds. There will be prizes for the O.M.'s and the X.Y.L.'s. Then also there will be a peanut scramble, etc., for the youngsters.

We have plenty of parking space for the timid. Of course, you bring your own lunch in a basket or a trunk or what else you require to convey enough foodstuff for your gang.

Members who wish to contribute towards the prizes should contact John Kull All donations will be certainly appreciated by the Club.

Now hear this.....

This Committee is working hard to make this picnic a big success and it won't be one unless each and everyone gets behind the project and purchases his ticket. Owing to the fact that circumstances prevented this Committee from getting an early start, your cooperation is requested in purchasing your tickets as soon as possible in order that they may have some idea as to how to prepare for the affair.

One profits more than he realizes from the fellowship derived from an affair of this kind. A special effort will be made for each member and his family to meet and know the others present, as it is the feeling that heretofore, this familiarity has been lacking, and we don't want anyone to be a stranger or remain one very long.

Here is your chance to get the O.W.'s and X.Y.L.'s who in the past have heard nothing but hamming, find out that we do have a social side to the club activities which we want them to participate in.

So fellows, talk it up.....talk about it over the air. Try to contact each member and see if we can't make this the biggest and best picnic ever. You know it is your picnic, your club that is putting it on for you. Do your part.

Your crosstalk staff is in the process of bettering the front page for the paper as difficulty was experienced with the plate during the printing of the June issue. Had a number of phone calls from various members inquiring what happened to the June issue. The answer was that we ran into trouble with the printing and we have tried to make corrections, that this will not happen again. We are striving to have this paper in your hands prior to the meetings. We have found that we must get this paper in the mail at least one week before meeting time in order that you have your copy in time. Of course, we are only human and these things could happen to anyone. One thing that we are sure of: the paper is doing the job.

What appeals to you as a member of the Gloucester County Amateur Radio Club? What do you like and what don't you like about it? As your officers are constantly striving to make the club better for you as an individual member, your suggestions are in order and welcome. Constructive criticism is what we are looking for and if the suggestions merit it, we will do everything possible to try your suggestion and see how it works. Bear in mind that no one is perfect, and therefore it's the effort that counts.

By having you come forward with suggestions shows us that you are interested in how your club is doing. We would like to have about twenty-five suggestions and out of them get one or two excellent ones, rather than only five that have no merit and cannot be used.

Each for Others

The race of mankind would perish did they cease to aid each other. We cannot exist without mutual help. All, therefore, that need aid have the right to ask it from their fellow men; and no one who has the power of granting can refuse it without guilt. Sir Walter Scott. Ed. note: I feel that there is a lesson in the above paragraph. You can use this idea daily; you can use it in our club; you can use it with your neighbor; really, there isn't anywhere it cannot be put to use, but I was thinking primarily in conjunction with our club. Each one of you has something that you can contribute for the welfare of our organization. Why don't you???

In your last issue of "Crosstalk" I made a plea for more material. I am happy to report to you that since then I have received several items suitable for publication for which I want to thank the "donors". Keep up the good work fellows, you really don't realize how much this helps out and goes towards making a better paper for you. If you cannot write, just jot the information down and send it to me and I will write it up for you.

Swinging chokes...it has been stated that the inductance of any given choke is dependent on the degree of the d-c flux saturation and the magnitude and frequency of the applied a-c voltage. It

follows, therefore, that the inductance of an iron-core choke will vary if the d-c current through the choke is changed. This phenomenon results in the terminology "swinging choke". All iron-core chokes will swing in inductance a certain amount, although those with relatively small air gaps in the core will usually exhibit the largest change in inductance as a function of a change in the d-c current. (In the design of a high-Q audio choke which may or may not have a direct current through the winding, it usually is necessary to insert an air gap in the core to maximize the Q.) A swinging choke is a most useful and important part of a good audio system. Try one in your audio power and see the difference, I did.

AN INTERVIEW WITH WB2YLL

By Harry McCormick, WA2SEA

I spent a most enjoyable afternoon down at the shack of William E. Scarlett, Jr. (Wil) WB2YLL

New Jersey to get this interview (and a nice cold 307).

Wil may be fairly new to legalized Amateur Radio, for he has had a Technicians License only since July of 1966, but back in 1936, Wil, then 17 years old, first got on the air on 160 meters by bootlegging, with the call W3GNW at his home in Lansdowne, Pa. Wil finally got caught by the radio inspector for this district, after operating on the 160 and 5 meter bands for two years. After that, things were quiet as far as Amateur Radio was concerned for Wil, until he enrolled in the club sponsored code and theory classes in 1966, which led to his Tech License, and club membership.

Wil was born in Philadelphia on March 23, 1919. As a child, Wil went to grammar school in East Lansdowne and graduated from Lansdowne High School. In 1939, Wil went to work for R.C.A. in Camden where he is still employed as a lab wireman. Amongst Wil's many jobs with R.C.A. his most recent experiences have been in the field of miniaturization and integrated circuits for the N.A.S.A. programs.

At present, Wil operates 6 meters with a home brew 6146 transmitter feeding into a 5 element beam and receives with a home brew converter into a Lafayette KT-340 receiver. Wil is working on a home brew 2 meter xmmitter and converter and hopes to be on 2 meters by the time his vacation is over this summer.

Wil has no regular operating hours, and is on 6 meters whenever he gets a chance.

His other hobbies are photography, stamp collecting and gardening.

Several of our former club members are now serving in the Armed Forces of our country.

Not much has been heard of them by our club members since they left for service with Uncle Sam.

The other day I was talking to the family of Henry Feltman, WB2MSH, and thought I'd pass along the information that I got about Hen.

Henry was a member of our club back in 1964 and 1965 (see the interview column of Crosstalk for Nov. 64).

September 7, 1965 Henry enlisted in the U.S. Navy for four years. After boot training at Great Lakes, Ill., Henry went to radio school at Pensacola, Fla. Now Hen is a 3rd class communications technician.

By the time this article appears in Crosstalk, Henry will be home on 30-day leave, he should be home about June 11th, after a tour of duty at Guam, since December 3, 1966.

After Henry's 30 day leave, he will be leaving for a tour of duty in Casa Blanca, Morocco.

While in Guam, Henry operated the club radio station, KG6AAY. The Guam radio club consisted of 24 members, 10 of which are licensed. In his spare time, Henry studied Aikido and reached the yellow belt rating.

While in Guam, Henry was lucky enough to get 19 phone patches into Woodbury.

If anyone knows where I can get some information on other former club members now in the service, I'd appreciate it if you would contact me so I can get the info into Crosstalk.

Did you know that A.R.R.L. now charges non-members a fee for W.A.S. and D.X.C.C. awards.

How is your phone procedure? Do you know the correct way to identify your station or the station being called, when it is

necessary to use phonetics? For example: if WA2ABC wants to use phonetics he should identify his station as WA2 Alfa Bravo Charlie, not Whiskey Alfa 2 Alfa Bravo Charlie. The F.C.C. has never issued a Whiskey Alfa 2 or Whiskey Bravo 2 call, they only issue WA2, WB2 and etc.

This warning has repeatedly been brought to the attention of the ham fraternity by F.C.C. personnel at meetings when talks were given by commission officials.

This is probably one of the most abused, but by no means the most serious offense in Amateur phone procedures.

Note:

Here's a letter received from ~~W~~ZGB, from Emporia, Kansas; quote, "Thanks for sending Crosstalk. Have enjoyed reading it. Sorry about our paper, but NVARC QRM was a losing cause and has reverted to a postcard notice of meetings with a few other notices. It was a losing cause last year, and we are having trouble keeping the club together this year, but haven't given up on either. Had to curtail my activities and was unable to get anyone to run the paper."

Ed note: This is what can happen without the cooperation of the club members.

SOMETHING NEW

The SCA-2B Sub-Carrier Adapter makes it possible for you to enjoy the background music transmitted on a 67KHz sub-carrier on many FM stations. (These programs cannot be heard on a FM set without an adapter.) In the United States there are approximately 400 FM stations authorized by the FCC to transmit the 67KHz programs. Size 4"x2½"x1½". Simply plug into your FM tuner/amplifier. All transistorized. Operates from PS-9 power supply for 6 to 12 volts D.C. Price of unit and adapter cords \$34.95. Write KENZAC Co., P.O. Box 66251, Houston, Texas 77006.

Note: This unit gives you music without commercials.

Say, received a very nice letter from Ken WB2EUU

Woodbury and from which I am going to let you read some of the interesting facts he wrote: quote, "I have missed the past three club meetings because of working conditions, but hope to make them regularly when able;;however, I do enjoy reading Crosstalk. My operating is as follows:8 to 10 hours on phone and 27 hours on cw. In the contest, my score 21,450 with 130 QSO's and a total of countries as follows 14 on 28MC., 25 on 21MC., and 16 on 14MC. On CW 290 QSO's for 109,620 points and countries total 6 on 3.5 MC., 12 on 7MC., 44 on 14MC., 45 on 21MC., 19 on 28MC. I got 15 new countries and had a lot of fun.

I have been a ham since age 16 when I held the call ~~W0RNH~~ in Nebraska. Awards here are WAS, WAC, DXCC, USA-CA, and first place for Glo. Co. in last years N. J. QSO party. I would like to volunteer for any field day plans the club may make."

Ed. Note: Here is some nice work from another of our new members. Seems as if the new boys are putting the pressure on some of the old timers...and this means you...keep up the good work, Ken.

Item

Eric Walton, WA2FMO, a former club member, is attending the University of Illinois. In June he will receive his M.S. in Electrical Engineering and will continue for his Ph.D. He is specializing in antennas, which he calls "electromagnetic field theory" and his M.S. thesis was entitled "An Investigation of Wave Polarization Effects in a High Frequency Radio Interferometer System." (pew, what a mouthfull) Eric's amateur radio experience helped him get the job done. He uses ham stations as a signal source for studying directivity and the phase relations of reflected waves.

Ed. Note: We just know that Paul W2YNK, a past president of G.C.A.R.C., is a very proud father especially with a father and son both sharing the same hobby. Our congratulations.

Hallicrafters are furnishing free a very nice bunch of QSLs. Said card is red, white and blue and depicts the Illinois Sesquicentennial, 1818 to 1968. A very beautiful card that is yours for the asking.

Heard that Jim Peck, W2LVW, was appointed Section Emergency Coordinator of the Southern New Jersey Section. Also that George Stewart, K2SQL, has been named Glo. Co. Emergency Coordinator. Congratulations to both of these fellows. Let's all give Jim and George our support in this very worthwhile public service activity.

Look on page 32 of June, 1968 Radio-Electronics and you will see an easy to construct new home protection alarm kit. It is listed as a new wireless fire, smoke and burglar alarm system. that can save lives and protect property. It seems to me that this would be a good project for the new members to cut their teeth on and become acquainted with construction techniques. A wealth of knowledge can be had by putting these kits together.

The Mt. Airy VHF Radio Club, in their club paper PACK RATS CHEESEBITS have as their first page an article entitled "Our prez sez" which I think would be a big asset to our paper if we could only use the same idea. How about writing an article for our paper each month, Jack? You know you owe it to your faithful subjects. Tell us what you are thinking.

I see where an almost drift-free VFO built around the RCA-3N128 MOS/FET for flexible operation; after 30 seconds warm-up, it tests out at less than 30 cycles drift in a two hour period, may be built from the 1968 Radio Amateur's Handbook. Some of you members who want to move about the band easily should look into this and try building one. I think one get's more benefit from building something rather than buying every piece of equipment.

The Partridge Electronics Ltd., Broadstairs, Kent, England, has come forward with some fantastic CX claims with a new type of antenna. It is called "JOYSTICK V.F.A." They claim that ZLITB has a terrific DX record with one, and that ZL4GA works G-DX on 80 meters with an indoor version of the JOYSTICK. No price is quoted but maybe it would pay someone to write to them and see what it is all about. I know that the 6 meter skeleton slot J antenna that I use has produced some very good DX with outstanding signal reports, and this antenna was designed and made in England.

Here are some more awards won by Bertha WA4BMC that I thought some of you would be interested in:

Six Meter Hoot Owl Net	United Nations Amateur Radio
Amateur Radio Leg Pullers Club	Buckeye Belles
Grandmothers Club	Chix On Six
Nebraska VHF Slave Cert.	Three Repubates
Five Towns Radio Club Award	Seldom Heard

Since I wrote about Bertha a few issues ago, I wonder if any of our club members have given any thought to this award business? You know I think that this is a very nice hobby to go along with hamming.

Humor Incident

Here's another experience that I had happen. Was talking to Mary Palmer, W5DEW, (the little dew drop in Port Author, Tex.) on 20 meter phone one day. Boy, does she have a Southern accent, WOW??? Well, I was trying to guess where she came from with an accent like that. After guessing Ga., Miss., N.C., and several others, I finally gave up. She told me that she came from Arkansas in the Ozark Mts. I said that is the place where they don't wear shoes. Her reply was that her husband wouldn't buy her any shoes because she spent too much money on radio. After talking a little longer, we signed off. Three weeks later, I worked her again, and she recalled the last WSO we had about shoes, stating that the following week, she received a pair of old-fashioned button-up high ladies shoes about twenty years old from a person living in Mass. who was listening in and heard both sides of our QSO. Needless to say, they occupy a place of honor upon the wall of Mary's shack.

Ed. Note: I still say that some of you fellows have had similar experiences, which would make interesting reading. Why don't you send them in to me?

Last night I talked to K3RSK in West Chester, Pa. on six meters. His audio was distorted slightly making it hard to copy. Upon informing him of this, he said that he was afraid to turn the dials on his Clegg 66er for fear of losing the contact. Evidently he was unable to understand how to tune-up his rig properly. I told him to get the aid from a few older hams that I knew in the area, stating that they would be pleased to help him. What are you doing to help a Ham in need?

Positive grid current is defined as electron flow from the cathode to the grid within the tube. This current flows whenever electrons are emitted from the cathode with an initial velocity great enough to overcome the retarding field and reach the grid. Cathode temperature and cathode material determine the distribution of initial velocities. Low heater voltage, high negative bias, and high plate current (screen grid voltages in pentodes) tend to reduce the positive grid current for any given tube.

Negative grid current is defined as the flow of electrons from the grid to the plate current stream is usually smaller but more erratic than the positive grid current in voltage amplifier tubes. The primary reason for this current is the ionization of the gas in the tube by collision with high-velocity plate stream electrons. Some of the positive gas ions so formed flow to the negative grid where their charges are completed by those electrons supplied to the grid through the external grid circuit. This electron flow through the external grid circuit resistance causes a change in bias in the direction of zero bias which in turn causes an increase in plate current and results in an increase in the rate of ionization. Because this effect is regenerative, it is necessary to minimize the grid circuit resistance or employ cathode biasing if gassy tubes are used. This effect is more pronounced in power tubes because of the fact that the high operating temperatures cause the liberation of occluded gases. In any tube ionization can be minimized by operating at reduced plate and screen voltages and currents. In amplifier applications, a minor cause of negative grid current is secondary emission from the grid. This effect has been reduced by the selection of special metal alloys or by gold plating the grid. Generally in most small voltage amplifier tubes, the negative grid current will be considerably less than one microampere.

In general, a pentode requires a smaller control voltage and, for a given load current, can be operated at a lower plate-to-cathode voltage than a triode. Pentodes frequently make desirable series tubes.

Quiz

(9)

1. $A = BCD$

Given: $A = 12$; $B = 8$; $C = 0.5$;
what is D ?

2. $R = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}}$

Given: $R_1 = 1$
 $R_2 = 2$
 $R_3 = 4$

what is R ?

3. $Db = 10 \log \frac{P_2}{P_1}$

It is desired to get 10 Db gain by raising P_1 to P_2 . If P_1 was 100 watts, what is P_2 ?

4. $Z = \frac{RX}{\sqrt{R^2 + X^2}}$

$Z = 2$; $X = 4$; what is R ? (best estimate is OK)

This information that I pass along from time to time is for the benefit of some of the newer hams coming along and if they will absorb it they will soon learn that this knowledge can be put to practical use and may be the answer to some of the problems they are having with their rigs. Of course, there may be some of the older hams who also can learn or at least renew some of the knowledge that they had long ago forgotten. I know that some of you are going to say that it is kid's stuff.

Scuttlebutt

The big news this go-around has to be John Kull, WB2GKH, passing his General Ticket. Word has it that John had been up to the Customs House before. Many congratulations John, perserverance and diligence has paid off; many hours of short wave band SSB are wished upon you. The Advanced Class is next, John.

Bill Shaw, WA2PVI, looking tanned, fit, and contented after an extended trip down toward HP land. Good to see him back and all in one piece this time.

By this time, Field Day 1968 will have been history. It is our fervent wish that all-hands were on hand to assist with setting-up, operating, and dismantling. To many, including myself, FD is the high-light of the Club year. A chance to get away from it all for a day or so and a challenge to one's stamina, ability and intestinal fortitude (not to mention a bk fm the XYL and their honey do this, honey do that!). Once again our capable FD chairman was Bill Frambes, WB2FJE, who did another bang-up job again this year. (This is written before FD which displays the confidence we all have in Bill).

NOTE: I would like to list in this column next time all club members who have obtained WAS and/or DXCC awards. So please let me know whom you are (bet our club doesn't have very many).

If anyone received his or her X-Talk late last month don't be alarmed! (we all did!) Seems though Williamstown is so far out in the sticks they still have the pony express run from out of there.

After the foul-up in the grand prize drawing last month (K2SOL left at the gate), it would seem the eventual winner (WA2VEE) was really lucky on this one. Let's hope next time all are informed well in advance as to the ground rules for these drawings.

Quiz! Quiz! Quiz!

Appended to the paper this month is the math quiz presented to the members at the last club meeting. For the benefit of those

who could not attend (and perhaps for those who wish to try again) you may wish to see how you stack up at solving some simple algebraic equations encountered in the Technician, General, and Advanced Class license exams. These problems were presented to 25 members and guests following a 30-minute refresher course in solving these very type problems.

The scoring run-down at the meeting was as follows:

<u>Score</u>	<u>Number of Hams</u>
100	3 (WB2EUU, K2AQL, WB2SCK)
75	2
50	6 Class average is 33 (Wow!)
25	3
0	11

Congratulations to those getting 100. One can see that the test scores fail to qualify the instructor as being any good. (Or maybe these scores are an indication of why there are so few Advanced and Extras among us.) Anyone interested in the correct answers can obtain same by showing up at the Club Picnic in July. Incidentally, don't forget to get a ticket to the Club Picnic. Plenty of prizes and good times await all.

CU there.

73's

de WA2NPD

OFFICIAL BULLETIN NR 168 FROM ARRL HEADQUARTERS
NEWINGTON CONN MAY 4, 1968 TO ALL RADIO AMATEURS BT

The ARRL Board of Directors met at Hartford, Conn. May 3-4 with two days of informal sessions preceding. To improve public relations as well as create more interest in amateur radio the board authorized production of a half hour motion picture for showing in schools, at civic clubs, television, etc. ARRL will request FCC to permit present technicians and current or former one-year novices to apply for a two-year ticket. The Board also ordered a study of methods of simplifying the application procedure for novice and other mail examinations, and of a new league publication at the teen age level. FCC will be asked again to defer effective date of incentive licensing restrictions in the six meter band. The board adopted a basic format for ARRL advisory committees with appointed volunteer field personnel to assist in proposals of members in various fields. Two such committees, one on VHF repeaters and a second on contests, were approved, with a directors group to complete rules for committee operation within 90 days. An overall study was ordered of amateur band occupancy, and of effects of contests on band usage. The Board directed the establishment of a new five band DXCC award, and an amendment of DXCC rules to permit submission of cards in multiples of five by members with 300 or more country credits. Discussion of an outgoing QSL Bureau indicated many practical problems which the general counsel and general manager were directed to appraise and then make recommendations. Additional studies were ordered of R. F. interference problems. A possible league publication on FM, the ARRL field organization, the affiliation of nets in the same manner as clubs, and the possible move of novices from 21 to 28 MC. Roemer O. Best W2QKF and P. Lanier Anderson W4MWH were elected vice presidents, while president Robert Denniston W0DX, first vice president Groves W2NW, secretary John Huntoon W1LVW and treasurer David Houghton were reelected for two year terms. Directors Compton W0BUO, Eaton VE3CJ, and Smith W0BWJ were reelected to the executive committee, and director Harry J. Dannals W2TUK newly elected to that committee. Highlights will appear in June QST and full minutes in July QST. AR

OFFICIAL BULLETIN #169

FCC has adopted rules which allow shut-ins to obtain advanced and extra class licenses. Examinations may be conducted by volunteers who hold the same or higher class licenses than the one being sought. Otherwise, the rules presently applying to conditional class tests for the disabled will govern. The change, supported by the ARRL, was brought about by a report and order in Docket 17989, and becomes effective June 17, 1968. The text of the new rules will appear in the July issue of QST.

OFFICIAL BULLETIN #172

During the summer travel season many amateurs stop by to visit ARRL headquarters and the Maxim Memorial Station, WIAW. The League headquarters building is open to visitors Monday through Friday, 8:30 to 4:00 EDST, without appointment. Other times can be covered by writing and arranging for a tour. Printed direction to ARRL are available without charge. Send a self-addressed envelope to ARRL, 225 Main Street, Newington, Connecticut 06111.

FOR SALE: NC-125 \$40.00 Work O.K. Jack Sterner W2GQK,