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CROSSTALK

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September 1969 Issue  
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CROSSTALK is the Official  
Publication of the Gloucester  
County Amateur Radio Club

CROSSTALK STAFF

Wally Martin, W2PLD, Editor,  
Bill Frambes, WB2FJE, Printer  
Bill Shaw, WB2PVI, Circulation  
George Stuart, K2SOL, Advisory Committee  
Bob Spain, WB2RVE, Tech.  
Harry McCormick, WA2SEA, Interviews  
Doug Gehring, WA2NPD, Scuttlebutt

September Club Meeting is September 3rd at the Clubroom.

Program: Understanding and Testing with the VOM, presented by K2SOL.  
(We find it hard to believe anyone would want to miss this program.)  
"Q" Described  
Scuttlebutt  
etc.

Hi Gang,

We apologize for a rather abbreviated edition this month, but due to a plethora of vacations by key journalists, editors, and Nobel laureates, we feel fortunate that what is promulgated here has arrived at press time.

September 3rd Club Meeting

We had a near record August attendance at the WB2PVI Villa last meeting (some 34 or 35 members). We don't expect to top that attendance this month, but we can try. George Stuart, K2SOL, is cooking up a real fine program for us centered around the construction and use of a VOM. Perhaps, by the end of the program, we will all be expertise in knowing how to use this valuable device for troubleshooting our rigs. See you at 8:00 p.m. on the 3rd.

New Cover

Courtesy of WB2FJE, the Club paper now has a cover. We hope and trust this cover will give X-Talk a new distinctive flavor. FB Bill.

## Club Picnic

An official note of thanks goes to John Kull, WB2GKH, for another fine job handling the arrangements and festivities at our picnic this year. Most everyone won some sort of prize (especially the number hawker WB2WAK) and everyone enjoyed themselves, especially the harmonics. See you all in "70".

### GCARC OFFICERS - 1969

President, Bill Bachman, WA2VEE  
Vice President, Bill Shaw, WB2PVI  
Recording Secretary, Paul Callaghan, WB2WAK  
Corresponding Secretary, Della Parker, W2AFZ  
Treasurer, Ken Newman, W2FBF

Director, John Kull, WB2GKH  
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Director, Fred Bergman, WB2BPX  
Director, Jim Mauro, WA2DNL  
Director, George Stuart, K2SOL  
Director, Doug Gehring, WA2NPD

Trustee, Gordon Cooper, W2PAX  
Trustee, Paul Walton, W2YNR  
Trustee, Paul Birney, WA2IOY

From time to time, we shall publish a complete list of your Club Officers. In this way we shall accomplish two purposes: (1) to inform all as to who the officers are and (2) so that you will know who to "bug" in order to get a job done, promote an idea, or accomplish some purpose. The Club Officers are ready, willing, and able to serve you, the member. Don't hesitate to take advantage of their talents and functions.

### The Q of a Resonant Circuit, by WA2NPD

For the Tech. or General License, most of us memorized that  $Q = X_L/R$  and that was that. But how many of us really understand the significance of Q, often referred to as the quality factor? Quality of what and why?

To get maximum selectivity from the resonant circuit (tuning circuit) of a receiver, it is necessary to obtain the largest possible current at the desired frequency with respect to the currents (signals) from nearby stations. (A similar case can be presented for signal generation, but we will stick to reception here.) We all know that current flow is restricted by the ever present resistance (R) in any circuit. Thus, if we can minimize the resistance in our tuned circuit, the current flow will be greater at the resonant frequency, signals from nearby stations will be proportionately weaker, and we say that the selectivity or quality (Q) of the signal is optimized.

The tuned circuit is simply a coil and capacitor (usually variable in series or in parallel. The resistance of such a circuit is almost exclusively lodged in the coil. The coil resistance is the effective AC resistance and includes the resistance of the wire, losses due to distributed capacitance between the coil windings and neighboring components, and losses due to the skin effect of AC flow. In a well-designed coil, R is due almost entirely to skin effect. The less the resistance of the tuning coil, the better it is and the better the Q of the circuit. This quality or "goodness" is thus expressed as a ratio between the inductive reactance ( $X_L$ ) and the resistance (R) of the coil. Hence,  $Q = X_L/R$ . But we know that  $X_L = 2\pi FL$ , substituting then,  $Q = \cancel{2\pi}FL/R$ . From this relationship, we might surmise that the higher we go in frequency, the more selective and the better will be our coil. Unfortunately, it doesn't work out that way, for R also increases as we increase frequency due to corresponding increases in distributed capacitance and losses due to skin effect. For these reasons, the Q of a coil remains fairly constant over a wide range of frequencies.

As new hams, we are often advised by the old pro's to build our rigs but buy our receivers. Their advice is generally well taken because perhaps the toughest job in home brew receiver construction is winding and positioning the band coils and capacitors to produce good selectivity so necessary to pick out signals in the crowded amateur bands.

de WA2NPD

### SCUTTLEBUTT

A new record for getting dues in just under the wire has been achieved by WA2PVH. John claims his XYL hid his reminder letter and he just found it a day before the July Club meeting (although I suspect a new camera took precedence). Nevertheless, we are glad to see that the XYL gave you some cash John (Hi), --better late than never for sure.

Had nice chat on 3970 with Rose Ellen, WA2FGS, and the rest of the YL N.J. and Pa. net a few days ago. Not often that one gets a chance to talk with so many fine gals and no jabs or jibes forthcoming from my XYL because of it! (Hi). Thus, the advantage of over-the-air QSO.

Looks like Harold and Rick Carter located a real steal. They were given (or so they say) an old Army RCVR, in A-1 top condition. Expect to hear they have it on the air soon.

WB2FJE sporting a spanking new telephone pole which is about 20 ft higher than his present pole. His beam will now be far above all local trees. Looks like another job coming up for our beam raising crew in the near future.

Ask Della, W2AFZ, about her new "J" antenna on 75 M. With WB2FJE's help, she has constructed a rather new, unique marvel of the age. Will expect to see an article in QST describing this Della.

Talk about lame-duck excuses!! Bob, WB2RVE, was to present our Club program last meeting about amateur TV, but claims his car was smacked in the rear by another just prior to the meeting. Unfortunately, all of his demo gear was in the trunk and he couldn't get it out because of the trunk being jammed via the accident. Also, the Insurance Company had to check for damage first before he could remove the stuff. I guess we have to believe Bob, for he proved at a previous meeting that he really isn't stage struck in front of a group. (only car struck----ugh!).

In some respects, our Club picnic was best ever this year, or so my harmonic sez---, the RC plane crash was the reason--- a new first in entertainment for the kiddies. 16 Club hams and their families attended (grand total of about 40 persons) and all apparently had the usual fine time. The WX was perfect (a bit hot perhaps) but the water was swell. Another fine job by our perennial, efficient chairman, WB2GKH.

WB2PVI to again be commended for allowing us to hold our July meeting at his QTH. Good to see Steve, W2PZX, Woody, K2AQL, and Harry, WA2SEA out to the meeting. Wish these three guys (all top drawer hams) could make every meeting, yet we know that it is impossible for varying reasons. Max Richmond, WA2SFY, admirably pinch-hit for WB2RVE in presenting a talk on his mining experiences. Real good job Max.

Will say 73's now until next time.

de WA2NPD

### Code Classes - 1969

Or, perhaps, more appropriate, no code classes, 1969. To date, I have not received one phone call, one verbal inquiry, or any feedback whatsoever regarding anyone interested in attending code and theory classes this Fall. If you know of anyone interested, please advise WA2NPD as soon as possible. We expect to run a short article in the Woodbury Times informing of our desire to hold such classes this Fall. But, we refuse to set up for classes if no prior indication of some students is forthcoming. So, spread the word around and let us know of anyone who might be interested.