

NEXT MEETING

The monthly meeting of the G.C.A.R.C. will be held in the Borough Hall, 3rd, floor, Pitman, N.J. on Wednesday, January 7, 1970 at 8:00 p.m. The entertainment will be handled by Van Turner, W2KE, and his subject will be Communications and RACES, with the possibility of touring the Net Station. Come out and learn what is being done along this line.

I wish to acknowledge a Xmas QSL card from Col. A.R. Marcy, W4ID, addressed to the G.C.A.R.C. offering congratulations on CROSSTALK. This card comes from ARNS (Amateur Radio News Service) for which our club is a member.

SOMETHING NEW

An infrared communicator that transmits and receives either voice or digital information over a laser beam for distances up to six miles. The communicator uses a gallium arsenide pulsed laser beam as a carrier. To speed alignment, a 1000-Hz. tone burst modulates the beam. Then voice or data transmission varies the laser pulse repetition rate.

Applications for the device are expected in police, industrial and military situations that require secure communication. Santa Barbara Research Center, a Hughes Aircraft Co., subsidiary, developed the communicator.

QSL BUREAU

The club has a QSL card for WB2BVV that hasn't been claimed. This article is to call your attention and remind the members that your club voted to joint this Bureau, and so far the response has been very poor. I personally can't understand why members vote for a project and then drop it and let the personnel hanging in mid-air. This is so true for various projects that had been attempted in the past, and I am sorry to say died a natural death. I am sure that by now the various members are aware of the cooperation needed to keep our club going if we are to remain intact. It is easy to make a committment, and then don't do a thing to carry out your committment, giving as an excuse; I was busy; I didn't have time; I forgot; and a hundred other excuses, but this club can't run on excuses, and as far as being busy, everyone is in the same boat, one is just as busy as the other. If one has the interest and is willing he can find the time to fulfill his obligation. As I can see it, and I have been a member of the club since it first started, the tendency has been to sit back and let the other fellow do it as long as he will, but you know this fellow gets tired and wants a break too, but is afraid to quit for fear that the club might suffer. Are you one of these individuals? Did you know that I picked up a list of members in good standing in 1969; about 80 members, and I glanced over the list, there were about 50 members that I did not only know but had never seen at a meeting. Why is this, I do not know, but, I do know that you are not getting your money's worth. Think about this for 1970 and see if you want to attend meetings and participate in club activities in order that you get your money's worth instead of being just a name on the roll call. Amen Brother!

If an antenna radiates energy vertically downward, the energy will be reflected and a current will be induced in the antenna because of the reflected energy. The manner in which this induced current affects the total antenna current depends upon its magnitude and phase with respect to the original current, which in turn depends upon the attenuation at reflection and the height of the antenna above the earth. The resultant variations in total antenna current for a constant input power as a function of height of the antenna above the earth can be regarded as a change in radiation resistance.

Antenna systems are usually designed to have a radiation characteristics which vary with the direction from the antenna. A graphical representation of the radiation of an antenna as a function of direction is called the RADIATION PATTERN.

Radiation patterns may be specified in various planes through the center of the antenna, and such planes usually are chosen to include maximum radiation. A pattern in the horizontal plane is called an azimuth pattern, while a vertical-plane pattern is called an elevation pattern.

The BANDWIDTH of an antenna is defined as a range of frequencies within which its performance in respect to some characteristics conforms to a specified standard. The characteristic in question can be gain, beam width, impedance, or some related quality. If impedance is chosen, for example, the definition has physical meaning only when a standard value is selected. A representative definition of bandwidth is the range of frequencies for which the reflected power from the terminals of the antenna does not exceed one-third of the incident power. The term broadband is also subject to arbitrary definition. An antenna system possessing fairly uniform characteristics over more than a 15% band of frequencies is usually considered to be broadband.

The input or terminal impedance of the antenna depends on the physical configuration of the antenna and the frequency. The total resistive component of this impedance is the sum of the radiation and loss resistances.

Antenna elements separated by not more than several wavelengths will interact and produce mutual coupling. The magnitude and phase angle of spacing between elements, frequency, and orientation of the elements. The real component of the coupling impedance can be either positive or negative, and, in general, the resonant frequency of an antenna will be modified by coupling with another antenna. The coupling effect of a conducting surface on an antenna is the same as if the antenna were coupled to its image antenna, as reflected in the conducting surface.

RECIPROCITY. The properties of an antenna system are, in general, identical for transmission and reception. In particular, the radiation pattern of an antenna is the same regardless of whether the antenna is used for transmission reception. The power transferred between two antennas will be the same regardless of which is used for transmission or reception if the generator and load impedance are conjugates of the transmitting and receiving antenna impedances in each case.

FOR SALE

30 ft. triangular steel tower--excellent condition--in three sections complete with bolts, guy wires, and recent coat of paint. Just rite 4 tt tribander, The first \$10.00 takes it. See or call WA2NPD,

This is the first of a series of articles on the characteristics and uses of different types of antennas and is inserted in CROSSTALK in order that some of the newer members and Hams may take advantage of some knowledge that they here to for did not possess. Then, also, there is the need for some of the old timers to refresh their memories, as it is quite easy to become rusty in some of the most important aspects of Ham Radio, and, antennas play one of the most important parts of the hobby.

TELL (WRITE) IT LIKE IT IS.

The correct group count in a message is of great importance. Write out message and/or orders. Write it as received. Make no corrections on the assumptions that it should be changed to make sense. Here are two examples of how an order or message is changed by not being received or interpreted correctly:

Message sent via SSB by voice or VHF:
Do not send 100 insulators
Message relayed by teletype reads:
D not send 1000 insulators

Message received by individual the message was addressed to:
Note send 1000 insulators.

Message started out cancelling order of 100 insulators and received ordering 1000 insulators.

The second message relayed by voice by radio which led to a very serious incident in the present war, in which the operators or commanders misinterpreted the order as it was passed down through the command by voice.

Because of the seriousness of the incident, investigations showed the order from the Division Headquarters were "On no occasion must hamlets be burned down!"

The Brigade radioed the Battalion: "Do not burn down hamlets unless you are absolutely convinced that the Viet Cong are in them."

The Battalion radioed the Infantry Company at the scene, "If you think there are any Viet Cong in the hamlet, burn it down."

The Company Commander ordered his troops: "Burn down that hamlet."
Ohio Mars, AFA8WGJ.

OF INTEREST

Concerning Ohio License plates ... At an earlier meeting we reported that there would be an increase in the cost of Amateur Radio Call letter license plates for 1970. The bad word is now in your hands, and you have seen the price of plates for next year \$20. That breaks down to \$10. for registration; \$5. for special plates; and \$5. for the county. The hams are protesting to the officials who passed the bill.

The Canadian Amateur license fees went up. Protests were made and some slight reductions were made. There is in the offering increased proposals to all types of Radio and Television fees to increase, including the Amateur Radio Service. Many amateurs have become complacent, they may talk and complain, but don't act. The amateurs in Ohio were forewarned earlier in the year about the proposed increase in the Ohio License Plate fee for amateurs, but letters were not written.

An increase in all types of Radio License fees including Amateur is in the offering by the FCC. Proponent Andy Anderson, WA3GLX is busy drafting a letter in opposition to such an increase, and each one should send a letter to all persons who can influence such an opposition at FCC voting time.

OF INTEREST (Cont'd.)

Ed note...Keep this in mind for the same thing will effect us also, and it is better to be forewarned and start making preparations now instead of waiting for the axe to fall. It is not necessary for the Government with all the money it has to penalize the Amateurs for more income when Ham Radio has contributed so much in the form of personnel and know how toward the defense of this country. We have proven ourselves in times of diaster.

1970...

We are now embarking upon a new year, and have you made any resolutions for it? I mean resolutions concerning our club. There is an old saying that goes like this "A chain is no stronger than its weakest link." As I have had several persons approach me in reference to joining a radio club, most of them with very little Radio theory, but with a heck of a lot of desire; what do I tell them? First of all, I tell them about my own club. I must be sold on it myself, before I can sell it to others. And what makes one to be sold on anything? Is it attendance? Is it going along for the ride? Is it a reference point to be used for an excuse? Is it just the fact that I belong to something? Or is it some place where I can while away a few hours one night a week? Not one of these questions can be used as a bona-fide reason and therefore can't be used as an answer.

To be sold, you have to go for it 100%. You not only like the fellowship, but have to contribute something. Everyone has something he can give. In other words its a community, and you being a part of this community are obligated to contribute. We have a lot of new hams coming along and it is the duty of the older members to show these new prospects what is necessary to support a radio club, the type of individual we want in the club, lend them a helping hand, and try to further their interest to the point whereby they will assume some responsibility regardless of how small.

We can't expect the new member to offer when he doesn't know what he is offering. This year we must have more cooperation than we had last year. Each year, our club gets bigger, newer projects are attempted, and our expences go up. Have you ever stoped to think what would happen to the club if the handful of members who are now shouldering the bulk of the chores would suddenly quit and say that they are tired of doing all the work? How long do you think you would have a club? Not very long. I have seen organizations starts up full of pep and vim with members full of vinegar, each eager to do his part to get things rolling, and then when the club starts to go...bang... there's a let down, because the ones who started out in good faith either get tired or decided to let the other fellow carry the ball. This seems to be the cry of a lot of clubs today... but it doesn't have to happen in ours. We have enough members in our club that if each would do his part, the chores on each one would be light, our club would really m/ve with the minimum of effort.

How about it fellows? Don't promise or volunteer for something you don't intend to fulfill, because if you do this, you only make it harder on the ones who have to do the job that you said you would do and didn't. We are not concerned what other clubs are doing. The only thing that we are concerned in is what our club is doing, and whether or not we are progress-ing. Don't be afraid to hand in an idea or suggestion to the President whether

Editorial (Con'd.)

you think it has any merit or not. Some of the best ideas have come from persons who didn't think that they had any value. As we have the new material coming into the club, it is our duty as a member to enhance the potentiality, take advantage of all opportunities and let's get going right after January 1, 1970 and work, work, work....

A HAPPY NEW YEAR TO ALL MEMBERS, WITH SUCCESS, GOOD HEALTH, GOOD OPERATING AND LOTS OF QSO'S AND DX... 73 es CUL

Your Editor, W2PLD

SCUTTLEBUTT

Allow me to utilize the advantages of this column to wish everyone a somewhat belated Merry Xmas and Happy New Year. While I suffered with a lousy cold for part of the holidays (missed a good party here and there), failed to find a Henry 2K in my stocking (the hell with Santa and his memory), and reeled under the monthly Uni-Card bill, at least the Asian Flu missed attending the GCARC Board meeting last month, but expect to more than make up for lost time with Borough Council meetings for the next year or so.

Consensus is that WA2VEE did a highly commendable job as Club Prexy in 1969. It seems to me the downs (if any) were greatly outnumbered by the ups during the year--especially our December program which was conceived and largely carried-out by WA2VEE. Our membership increased, our FD was a great success, our programs (white elephant sale, etc.) very good, X-Talk is doing nicely, our treasury is obese, our code class is progressing, our nets are functioning, etc, etc. This has to be construed as a tribute to WA2VEE and his 1969 term. FB Bill. Wish the best of luck to WB2WAK, Paul, and his officers for 1970. After hard fought campaigns whereby each was elected to office by the slimmest of margins, I know each new officer will put out his best in 1970 to prove to all that he (and Della) was indeed worthy and a better man than the defeated opponent. We have a real top team leading us this year--so lets each and everyone of us do our utmost to cooperate and help-out when asked to shoulder some responsibility. There should be some committee for every member. If you haven't been asked to serve on a committee check with Paul. I'm sure he will see that you get the committee of your choice for this year.

This is old news by now, but nevertheless, many many congratulations to Della, W2AFZ for "her night" at the December meeting. The real reason for this nite was that many have been so proud of her for so long that something had to be done. FB to K2SOL, WA2VEE, and WA2FGS for their major parts during the evening.

I must apologize that, due to the holidays, some illness, and more laziness, the news for this months column is somewhat sparse (except to get in the swing next time). Permit me to blow my own horn again (seems to be a rhetorical egotism) and announce that, after many years of trying, WA2NPD finally received his WAC award (finally latched onto a Jap who wasn't a cheapskate). Hope to see each and everyone at the January 7th Club meeting.

PRESIDENT'S LETTER ...

Four years ago, I was welcomed into the G.C.A.R.C. At the time I was not very enthusiastic about the club. It wasn't due to the fact that Doug Gehring was our President or that Della was Publicity Chairman or that Jack Bowen was going to be our next President and following Jack, Bill Bachman. I just couldn't get involved. However, after getting to know many of the club members and just how involved they truly are, one just can't help getting involved even to the point of running for President. There are those who might say a person is always roped into being President let me assure you that I consider it an honor, thus I would like to take this opportunity to thank all of you for your confidence in me as your New President for 1970.

I shall do my best to make this year a memorable one for G.C.A.R.C. I would like to see better Programs, presented, an increase in our Field Day rating, our name mentioned in the February DX Contest, an increase in Technical Advisory participation and an over all Closeness between each and every member of our club.

Tnx fer ur condifence