

CROSSTALK

AUGUST 1963

VOL. 5

NO.8

Editor Publisher

W2LVW James Peck W2LVW James Teck .

CONTENTS

Official ARRL Buletins .

No Ham Trofiles .

Another article on SWR. Helpful Hints On Transmission Lines K2JKA Jack Layton . S.C.A.R.A. Field Day Report.

Where are We Going ?

K2JKA Jack Layton .

Want Ads. Notices and other sundry items

Meeting Notice.

1963 Officers

President Milt Goldman WAZECR Vice Free Delia Farker W24F3 Secretary Bernie Cohen K20JX Treasurer Harry Terry W.214.Z Borr. Sect. Taul Walton W2YNR

1963 Directors

Jim Feck W2LVW C.Sketchley K2FQD Tad Douber WA2CKX Van Turner W2KE

Mel Mason W2MMD Max Richmond W.2SFY

Meeting Notice... The regular meeting for the month of August will be held on Wed. August 7th, 1963 at the Owens Illinois Clubhouse. The program will be a panel type of discussion. See comments inside.

DONT FORGET THE HAMFEST SECREDAY AUGUST THE FOURTH.

SUNDAY

OFFICIAL ARRL BULETIN NR 904

A new temporary third party traffic agreement has been announced whereby amateurs in the U.S. may handle untimportant personal messages on behalf of third parties with amateur station 4ULITU in Ganeva, Switzerland, during the period July I through December 31, 1963.

I got a postal card from Dave Roberts WAZTOW, who went to VE land to go fishing and forget a little about ham radic. So who does he run into up there? .KSCZU. I bet that they talked about the DX that got away. Hill.

I also got a postal card from Harry McCormick WA2SEA, who wants to express his thanks to all who sent him cards while he was in the hospital.

Gil Hilman called me the other nite and asked that I remind you all that the tickets for the Hamfest or the money for tickets sold, should be returned to him either at the hamfest or at the August meeting at the harest. So a lattle bit of cooperation on this will help Gil make the proper accounting of the affair.

Part of the work involved here in the distribution of Crosstalk is the sorting of the completed Crosstalks by the towns in the county. I felt that it was of interest (maybe) to some of the rest of the club mambers, So here is the breakdown for last month. Woodbury II, Williamstown 3, Paulaboro 2, Mouroeville 5, Clayton 2, Mantua 3, Gibbstown 5; Thila 1, Belimawr I. Almonesson 2, Torofare 1, Camden I, Malaga I, Blenheim I, Blackwood 3, Titman 7, Seweil 5, Wenomah 7, Swedesboro 2, Glassboro 6, Westville 3, Sicklerville I. So there it is for whatever it is worth.

Swiped from SCARA News.... The unofficial count for field day was 846 contacts. So it looks like they also has a good time and did real fb on their field day.

* * * * * * * * * * * *

For Sale//// SX-28

SX-28 DX-20 Gotham V-80 Antenna, Six Meter Home Brew rig I2 Watts with power supply. Six Meter converter. Six Meter 5 element Hy Gain antenna... Contact Gil Hilman

At the Directors meeting Van Turner, who is the program Chairman announced that the program for August would be a panel type of discussion. The panel moderator will be Jim Peck. The panelists will be Woody Franz K24QI and Bill Gilkey WZRND. So here will be another chance for you to try to get an answer to that problem that has had you stopped for awhile.

The subject for the September meeting will be Solid State dircuitry by Bill Alexander W3GHZ. Bill is an engineer with Barker & Williamson. More next month.

Hont forget to come out to the hamfest this Dra. The 4th of August.. Not only come out but bring someone else with you if this is possible. This is a club activity and should be supported by all of the club mambers. How could we ask someone else to come to the hamfest if we didn't get there ourselves.

A reminder to the mothers (XYL's), if you want to get away from the hot kitchen stove, you can do so as I understand that not only will there be the usual hot dogs and soda pop for the kids, but hogies also . So you can even keep the OM going all day with one or two of these. Saves the time and trouble of packing a picnic basket too. So just bring the bathing suit and have a real ball Sat. the 4th of August...

Some of the reports that I have heard at the directors meeting and also on the air seem to indicate that there will be so many prizes, that there may be more prizes than Bernie can give away. And boy Bernie will really feel badly about giving some of them away, HiHi. Come to think of it, there are a couple of prizes there that I wouldnt mind winning myself. Now how can I get that ticket back in the box??????

Most of the present day transmission line: systems use one of two

main methods of transfering the RF generated in the transmitter up to the antenna. Probably the most popular one is the coaxial line or unbalanced line. The other one is the open wire or balanced line.

COAXIAL FEED SYSTEMS: The main advantage of this type of transmission line is the fact that it is very easy to handle. There are usually no major problems encountered with this type of line when entering a building with it. It can be installed in close proximity to other lines of the same type or metallic objects with no adverse effects, due to the fact that the outer conductor of these lines should be, and usually is, at ground potential. If RF is present on the shield of a coaxial cable you have problems. A basic precaution in the use of coaxial lines is to ground them at regular intervals. In some installations this may be impractical. If your transmission line is buried from the ham shack to the tower, a good ground at the transmittier end of the line, as well as at a point where the line leaves the ground to go up the tower, will usually assure the proper operation of this type of line. A surface voltage present on the scaxual cable is an indication that somewhere another line or the ground is forming a return path for the current and you may expect unusually high losses in the transmission line system.

Coaxial lines are unbalanced line systems but are not unmatched, or at least they shouldnt be. One of the most important pieces of equipment in the hamshack should be an SWR bridge and the knowledge of how to use it. We cant see the electrons flowing through the cables so we must have another means to measure it to assure proper operation. A SWR bridge is basically a fixed impedance bridge. Impedance is defined as a voltage to current ratio on a particular circuit or a patricular line. For example on a piece of RG-II/U coaxial cable, which has a characteristic impedance of close to 70 chms, the voltage to current ratio should be 70 to I when the line is operating properly, that is for every ampere of RF current there should be 70 volts present between the center conductor and the shield. On a 50 chm cable the ratio would be 50 to I. One other thing comes to into play when we are using a SWR bridge, this is reactance, If and Takko one of two forms, capacitive reactance, expressed as XC or inductive reactance expressed as XI. (XI)

The presence of either one of these demons will prevent you from obtaining a I:I SWR ratio. The only way to properly tune an antenna so that maximum transfer of energy takes place from the thansmitter to the antenna is to adjust the length of the antenna to resonance and then adjust the matching device, usually a gamma or I match on a beam, so that the impedance at the feed point of the antenna is the same as the characteristic impedance of the line in use. This is best facilitated with the SWR bridge connected directly at the feed point of the antenna. Contrary to what many people think, you only fool yourself by pruning the feedline in order to obtain a low SWR. On a properly matched line the SWR will be very close to being the same at any point in the line. On a line with a bad mismatch the impedance will vary greatly over the line. Thus if we move the position of the bridge in the line by cutting we will find that at every half wave from the antenna we get a true readingand at any other point we get foxed.

One last hint on coaxial lines. If you should have a shorted piece of coaxial cable a quick method of finding the point of the short is to use a grid dip meter. If the dipper is loosely soupled to the line and the frequency swept, it will be found that a series of frequencies at which the meter dips will be noticed. If you find a dip every seven Mcs (ie. 7, I4, 2I, Mcs. etc.) we would know that the short is one half wavelength of 7 Mcs. from the grid dipper. Taking into account the velocity factor (found in the handbook for most cables) as being 66% the distance would be on the order of 43 I/2 feet from the end. This can then be verified by taking the same resding from the other end of the coaxial line.

weakest link. You can have all of the power in the world confined at the transmitter if you cant radiate it you will get no where.

Jack Layton K2JK4....

ED's Comments... Well thanks to Jack for a real fb article and I agree and concur with his comments. These are the reasons why one fellow works out real well with a rig having nominal power and another fellow having the maximum power is wondering why he cant get out.

Next months article will cover Open Wire lines. I welcome more of this type of thing. So if anyone else wants to get an article in print just get it over here. We will edit it and put it in Crosstalk. The GCARC paper.

WHERE ARE WE GOING?

The club, as set up by its bylaws and constitution is headed by its officers and board of directors. There is no question in my mind that these individuals have the good of all at heart. However in my humble opinion I think that we should adopt some concrete proposals on exactly what we are going to strive for in the future. What advantages will you and I reap from our membership in the club next month or next year? What I am advocating is a chart for the future development of the club.

There seems to be a general trent in club thinking that we need more members. What will we have to offer these new members? What can they expect to gain from membership in our club? What can we as a club do to increase their enjoyment of their hobby?

Looking at a cross section of the club I think that you will find as many different interests as there are members of the club. The question now comes up, what can we do to pull the club closer together? I am interested in working DX on 80 meters! Maybe you could care less about 80 meters than flying to the moon, as long as your mobile rig on six meters is operating properly. Fortunately there is one thing that we all have in common, and of course that is amateur radio.

What we must find is a common meeting ground, something that all of us will be interested in, something that all of us can be a part of. One or several of these projects could be initiated and as a result of some project we could make some of the inactive members real live active ones. What good will 50 new members be to the general membership if they don't participate in the club activities? Especially if we don't have any:

I strongly urge the board of directors as well as the general membership of the club to consider this and come up with some definite plans and proposals for the future course that we will follow.

Gentlemen, this time next year lets be able to say that our club did something for amateur radio in general and quite a lot for its own members. Then when the non-member down the street, who may be considering a membership in our club asks the question "What can GCARC do for me?" and " Where will I fit into the club?" we can all have an answer for him! Let us be in a position where we can all tell him where we are going.

ED's Comments... Boy this is my type of artiwle ... Again I thank Jack for a fery PB thought provoking artiwle.. and very timely too. It is my firm beleif that all officers and all directors, should at all times think only with one thought in mind and that is What good will this do for the club members? Their every thought should be for the benefit of the most members most of the time.

As a follow up, and as soon as I saw this article I said to Jack, why don't you some up with some of your own ideas and write another erticle for next month. This way noone can say that you are just griping and have nothing constructive to offer. Jack agreed and next month we will see what he has in the way of suggestions. But again (and it seems that I do this every month) don't leave it to someone else. Send in some of your own ideas! The least that you can do is to contact one of your elected officers and/or directors and give them your views. If they are worth electing, they will listen to your opinion. After all if they don't represent you, then who do they represent well I can really get steamed up about this as I have st some of the last few board of directors meetings, but it is too close to the hamfest for me to get tee'ed off. So will just ask that you really give this some thought now and also at election time and if you have any ideas at all get them to your editor and I will print them. You know the directors and officers also read Crosstalk, At least I hope that they do.

You also may have notived that there are no ham profiles this month. Well dont blame me. I have just about run out of them and it took me seven months to do so. Again I will plead for more of them if you liked them at all Sent in a small resume on either yourself or a friend and fellow club member. He (and you too) will enjoy seeing your name in print.

This month I printed each and everything that was sent in to me. This is your paper not mine. Get those articles in. As long as it is a club activity or related to a club activity it will get printed. So far since I have become the editor there has not been one article rejected for any reason at all, whether I agree with it or not had no bearing on whether it gets printed or not. We print all the club news thats fit to print. His

* * * * * * * * * * * * *

Some operating pointers....

Switch to the band that covers the DISTANCE you want to cover. Use ur bandswitch. LISTEN... before you make a transmission.

BE BRIFF..., this will make contacts with you a pleasure. Whether CW or AM is used be concise, avoid monologuing or speech making.

DUMMY ANTENNA... and dummy antenna should be switchable for testing and tune-ups.

Keep unnecessary besting and transmitter tune-ups for resonance, or output off of the air..., use a dummy antenna...

MONITOR... preferably with gear that directly samples your on-the-air signal. This can aid UW keying and detection of any possible defect.

FOR LOCAL CONTACTS USE LOCAL FREQUENCIES: BANDSWITCH; MAKE OFFRATIONS CLEAN COURTECUS—CONCISE TASS ONE AUGURATE HONEST SIGNAL REPORTS. INCLUDE TACTFUL MENTION OF ANY SIGNAL DEFECTS.

All of the above hints swiped from ARRL operating aid number II.

SEE YOU AT THE HAMFEST.. SUNDAY THE FOURTH OF AUGUST....