

President: John Stull, WB2JZX
 Vice President: John Poulson, WA2PVH
 Recording Secretary: Harry McCormick, WA2SEA
 Corresponding Secretary: Della Parker, W2AFZ
 Treasurer: Paul Callaghan, WB2WAK
 Directors: Ken Newman, W2FBF
 Howard Carter, WA2OVQ
 Bill Bachman, WA2VEE
 Bill Frambes, WB2FJE
 Doug Gehring, WA2NPD
 Jack Bowen, WB2WKV
 Trustees: Wayne Wood, W2SUA
 Phil Mattison, WA2WOD
 Bill Bills, W2CDZ
 Gurdon Cooper, W2PAX

* * * *

UR X-TALK STAFF

Editor: Doug Gehring, WA2NPD, 468-5811
 DX Diary: Jack White, WA2MEM
 YL Page (Les Belles): Rose Ellen Bills, WA2FGS
 Ghost Writer: (Call lost in QRN)
 Ham Interview: Harry McCormick, WA2SEA
 Roving Reporter: John Stull, WB2JZX
 Contest Corner: Ken Newman, W2FBF
 ARRL Bulletins, etc.: Della Parker, W2AFZ
 Typesetter: Sue (Mrs. WB2FJE) Frambes
 Printer: Bill Frambes, WB2FJE
 Circulation: Bill Shaw, WB2PVI

* * * *

CLUB NETS

6M AREC	- 50.9	MC	Sundays	- 8.00 P.M.	Local Time
10M AREC	- 28.8	MC	Fridays	- 9.30 P.M.	Local Time
Novice	- 21.225	MC	Saturdays	- 8.30 P.M.	Local Time
Novice AREC	- 21.225	MC	Mondays	- 8.30 P.M.	Local Time
Friendship	- 7.265	MC	3rd Sunday	- 12.30 P.M.	Local Time

CLUB MEETING, OCT. 4th, 8 P.M. AT THE MEETING ROOM
"PARADE, OCT. 7th"

OCTOBER CLUB MEETING

The meeting will include a brief presentation by W2SUA on the latest FCC rule changes announced last month. As most of you know, Shorty is Assistant to the ARRL Atlantic Region Director and is well qualified to keep us abreast of these latest developments. An eyeball QSO and the usual FB refreshments will round out the show. See you all there on the 4th.

K3WIL ON SICK LIST

We were saddened to learn that Milt, K3WIL, suffered a heart attack some weeks back and, at this writing, is in Lanckaman Hospital, Pa. Milt is progressing OK but the road back will require time and plenty of rest. Milt, for years one of GCARC's tireless workers, past president, and a most dedicated member, is too nice a guy to be stuck in a hospital for long. We all wish him a complete recovery and trust that the 6 M mike will get a good work-out during the convalescence.

CONGRATULATIONS TO W?2AXJ

Our latest novice to pass his General exam is Steve, W?2AXJ. Don't forget to see WB2WAK and collect your wampum Steve. The club is indeed proud of you.

WA2OLS NEW ASSISTANT EC

Rick, WA2OLS, has accepted appointment to the post of Assistant EC for the 10 M AREC Net. Rick takes over from Bill, WB2FJE, who held this post (and did well) for 3-4 years at least. Let's all get behind Rick and give him our support on Friday nites, 9:30 EST, 28.8 MC.

FLOAT COMING ALONG!
WB2JZX MAKES IT TWO-FOR-TWO!!

The judging was singularly impartial, no formal "Rigging" complaints were received, and a sort of closed ballot system was employed. Yet - in spite of all these precautions, our wiley, canny (and we must confess) talented prexy came through again! John's dues are now paid-in-full for two years hence as his "Snoopy" design walked away with 1st prize. John's reward was to be "locked-in" to having his garage serve as the float construction site where, at this writing, the float is nearing completion. Yeoman workers have included W2FBF (chairman), WB2JZX, WA2OVQ, WA2OLS, WA2MEM, WA2MFS, W2AFZ, WB2FJE, WB2GKH, WA2SEA, WA2PVH, WA2WOD, WB2DZY, WB2OER, and WN2AXJ.

Don't forget the Fall Festival Parade where our float is certain to win something. Remember, October 7th, 7 P.M. in Woodbury. Wear your club jacket to the parade. Let the spectators know who built the winning float!!

CONTEST CORNER

New Jersey QSO Party Results:

	<u>QSO</u>	<u>ARRL SEC.</u>	<u>SCORE</u>
W2FBF	320	54	17,280 **
WB2WAK	301	53	16,801 *
WA2FGS	167	40	6,680 *
WA2OLS	142	20	2,920 *
WA2MEM	15	12	200
WA2NPD	28	7	196
W2CDZ	16	10	180
WB2FJE	25	7	175

* Club Certificate Winners. (100 or more QSO)

** Prize Winner. (Top Score)

Not a bad showing this year. Expect next year to be even better.

73's de W2FBF

REMEMBER THE CLUB COFFEE CAN

See John, WB2GKH, if you don't know what the club coffee can is or represents (he will love you for it).

CODE CLASS "SCRUBBED"

This year's class, to have been presented as part of the Glassboro Adult Evening School Program, was canceled because only one student registered (they require minimum of 10). Well, we did our part in offering to the public this instruction and plenty of publicity was given out. This is not the first time our course was canceled due to lack of student interest (we can recall at least 3 times in past 10 years), the enthusiasm being somewhat cyclical. WA2NPD wishes to thank those who volunteered to teach--maybe we can go get em next year.

CLUB JACKET DRIVE TO BEGIN

Want one of those good-looking GCARC jackets? We know some of you previously signed-up, but, because not enough of you (we need 10 minimum) stepped forward, no order was placed. Well, let's try again. At the Oct. 4th club meeting, Doug, WA2NPD, will collect your order (and \$5.00 deposit). We feel we can get the necessary "minimum" in order to get the letters printed on the back. Be prepared--don't get caught at hamfests, parades, CD or RACES functions without your jacket!!

WILL GIVE AWAY FREE!

Roy Peterson, 112 West Street, Woodbury, 845-7712, has a 10 M mono-bander beam (3 elem.) to give away to the 1st GCARC ham who comes and gets it. (Just right for the new General anxious to join the 10 M Friday nite net).

GCARC FORGETS NET SKED?

The West Side Radio Club/Gloucester County ARC Friendship Net held its first get-together of the 1972/73 season on Sunday, September 17 at 1700Z on 7265 khz. Band conditions were excellent between S.J. and Ontario with qrm never a problem. On the Canadian side we had Dave - VE3BHZ, Dave - VE3DAV, Bill - VE3AR, John - VE3GFR, and Chris - VE3CJK. On this end we had John - WA2MEM and Jim - WB2OER.....! To say that I was disappointed with the GCARC turnout would be an understatement! Fortunately two non-members of GCARC checked in; Ken - WB8HIW, Akron, Ohio, and Bill - W1GRC, Chatham, Mass. who partially bailed Jim and myself out of some of our embarrassment. To chew up some time after we made contact, I talked about the club certificate which GCARC would happily award to their side's members for working ten of ours. You can imagine how silly I felt after taking a number of standbys for GCARC members to check in only to be greeted with dead silence each time! Our Friendship Net between the two clubs is quite unique among the likely thousands of nets in amateur radio - so much so that it was, recently, the subject of a fairly lengthy article in QST. The fellows from West Side Radio Club were very likely aware of Jim's and my embarrassment - no one mentioned that only two of us showed to represent GCARC's some 65 members. Sri, had to get it off my chest! The next Friendship Net is scheduled for SUNDAY, OCT. 22, 1 PM LOCAL TIME OR 1700 GMT, ON 7265 KHZ + or - 5 KHZ FOR QRM. Do check in for this most worthwhile hands across the border fraternity between our two fine amateur radio clubs!

Jack, WA2MEM

X-TALK TAKES 3rd PLACE

In the annual ARNS Club Publication Contest, the Reader Interest Category. We were up against 11 other papers in this particular class. Oh well, better luck next year!

* * * * *

LES BELLES

by Rose Ellen - WA2FGS

Brace yourselves gals---here it is October which means contest times are here again. October 6-9 is the Massachusetts QSO Party; 7-8 is the California QSO Party; 18-19 is the YLRL Anniversary C.W. Party (this contest is open to all licensed women operators throughout the world and all are invited to participate.) YLRL members only are eligible for the cup awards. Non-members will receive certificates. Only YLRL members are eligible for the CORCORAN AWARD. Contacts with OMs WILL NOT count. Contacts on nets do not count. The procedure is to call: "CQ - YL". All logs must show claimed score, be signed by the operator, be postmarked no later than November 18 and be received no later than December 3, 1972 or they will be disqualified. Please check your logs carefully--be sure they are complete.

LES BELLES (Cont.)

October 21-22 is the Boy Scouts Jamboree and then comes the big weekend we all have been waiting for - 28-29th CQ WW DX PHONE CONTEST. This contest starts 0000 gmt Saturday and ends 2400 gmt Sunday. Give the om a break and help him log this year. Log sheets do not necessarily have to be the official CQ forms but the prescribed format should be followed. Good luck. If you need contest logs, send in your S.A.S.F. early to CQ World Wide DX Contest, 14 Vanderventer Ave., Port Washington, L.I., New York 11050.

One thing all the XYLs have to keep in mind is something in the food line to be on hand during a contest. While waiting in those pile ups the following could be made up ahead and kept on an electric warmer:

PANCAKE ROLL-UPS

1 cup sifted all purpose flour	2-1/2 cups milk
4 teaspoons double-acting baking powder	1 egg, well beaten
1 teaspoon salt	1/4 cup shortening, melted
1 cup yellow cornmeal	16 brown'n serve sausages, browned
Applesauce, warmed - Maple-blended syrup, warmed	

Sift flour with baking powder and salt. Mix in cornmeal. Combine milk, egg, and shortening; add gradually to the flour mixture, stirring only until smooth. Use 1/4 cup batter for each pancake. Brown on hot griddle until bubbly on top. Turn to brown on other side. Roll each pancake around a hot brown'n serve sausage. Serve with applesauce and syrup. Makes about 16 roll-ups. These pancake roll-ups make a very special brunch for any contester--at any hour.

For thawing ease, place a piece of plastic wrap between each chop or hamburger patty before storing in freezer wrap. This way you can store a week's supply in a package.

* * *

THE CHALLENGE OF T.V.I.

(Reprinted from The Ontario Amateur, Issue 3, 1972)

By: Bill Loucks, VE3AR and
Paul Helary, VE3CWN

So, you have TVI. So, welcome to the club. Very few amateurs can operate regularly on 14 MHz or higher without experiencing TVI at some time or other. This is nothing to be ashamed of--rather it should be considered as just another problem to solve--a problem with two facets, one technical, and one social, or having a bearing on human relations. Very often the lack of social skills is the major problem to be surmounted. However, when handled properly, an experience with TVI can represent a wonderful piece of public relations on behalf of the amateur radio fraternit

THE CHALLENGE OF T.V.I (Cont.)

First of all, let us state unequivocally that technically all TVI can be eliminated. Sometimes the solution is too costly to be considered seriously, but for every case, there is one or more solutions. For example, take 50 MHz operation around Toronto. Most Toronto amateurs find that the solution to their TVI problems on this band are too costly or too difficult--because of the non-local channel 2 and 3 stations available--with the result that the band is infrequently used, and then only during secondary TVI viewing hours. However, a few amateurs have been able to improve the front and selectivity of their neighbours' TV receivers sufficiently by means of high pass filters and traps to permit them to operate at any time. A word of caution at this point: the consensus of opinion of the various TVI committees that we know about advocates a hands off policy when it comes to doing any work on a neighbour's television or stereo set. Advise and/or consult with a factory representative or service man, but unless you wish to be blamed for everything that goes wrong forevermore, keep your sticky little fingers out.

TVI can be broadly classified into five groups as follows:

- (1) Overloading of the TV receiver by the transmitter fundamental signal (Fundamental Overload),
- (2) Audio rectification,
- (3) VHF-UHF parasitic oscillations,
- (4) Impairment of the picture due to radiation of harmonics,
- (5) Non-linear devices.

Let us now look at these five categories in the order mentioned:

Front End Overload

The example of 50 MHz TVI is almost invariably due to front end overloading of the TV receiver by the fundamental frequency radiated from the ham antenna. This phenomenon, however, is not confined to only 50 MHz operation. It has been common also on 28, 21 and 14 MHz, and to a lesser extent even on 7 and 3.5 MHz. The usual symptom is a blanking out of the picture, often accompanied by sound modulation. It is due to lack of selectivity in the TV receiver front end, and is usually most noticeable on the low channels (2 to 6). The cure for this condition usually is to add the required selectivity in the antenna circuit of the TV receiver, either in the form of a tuned trap, or preferably by means of a high pass filter. As its name implies, a high pass filter will pass high frequencies about a certain point known as the cut-off frequency, and reject lower frequencies below the cut-off frequency.

These high pass filters can take the form of simple devices with two coils and two capacitors, and can be as small as one inch by one inch. Or, they can be intricate marvels of engineering design. We in RSO recommend the Drake TV 300-HP filter which is sharp enough to reject 50 to 52 MHz, but pass 54 MHz and higher in the TV bands. (These are available from RSO at cost.)

Another form of interference with symptoms similar to front end overload that used to be fairly common was pickup by the TV receiver at its intermediate frequency. Early TV sets usually had an if from 21.25 to 25.72 MHz, which sometimes made 21 MHz operation difficult or nearly impossible. If the rf was being picked up directly by the TV receiver and not through the antenna or power line, about all that could be done was to add shielding to the TV receiver. For many years now, however, the standard TV if has

THE CHALLENGE OF T.V.I (Cont.)

been 41.25 MHz to 45.75 MHz. Although the second harmonic of a 21 MHz signal falls inside this pass band, very few cases of interference due to this cause have been reported. However, it is not an impossibility, and should be kept in mind.

Audio Rectification

Audio rectification can occur in television sets, but is more commonly found in Hi-Fi or broadcast sets. It takes the form of clicks or thumps and possible signal blanking with a C.W. signal, and Donald Duck garble with a side band signal. Somehow, the rf is being picked up and fed to a device such as a low level audio transistor or tube, where it is being rectified and then amplified in the usual manner. The rf may be picked up directly by the set, by its antenna, by the power line, by the inter-connecting cables between the components, or commonly by the speaker leads especially when extension speakers are used. One of the first things to try if you encounter this kind of interference, especially if extension speakers are used, is to connect a .01 to .005 ufd disc ceramic capacitor across each pair of speaker terminals right at the terminal board on the amplifier. This will effectively by-pass the rf picked up on the speaker leads, without affecting the quality of the sound. Sometimes additional "ground" connections in the sense of bonding are required between the different components. In some cases, it may be necessary to by-pass the low level amplifier with a 100 pf capacitor, which, of course, should be done by a service man and not by the amateur.

VHF-UHF Parasitic Oscillations

Parasitic Oscillations in the VHF-UHF range are not common in modern commercial equipment, even when purchased in kit form. However, they can occur in any equipment and especially in home-brew one-of-a-kind layouts. These oscillations are not harmonically related to the fundamental, and usually their frequency is relatively unstable. Perhaps the easiest check for these is by use of a general coverage VHF receiver, but these are rather scarce. Another useful check can be made as follows: first, make sure the final is properly neutralized; then, remove the protective grid bias on the final or other suspect stages, replacing it with a grid leak of 10,000 to 20,000 ohms. All load on the output of the final should be disconnected. Plate and screen voltages should be reduced to the point where the rated dissipation is not exceeded. If you do not have a variable transformer, voltage may be reduced by placing a 115 volt lamp in series with the primary of the plate transformer.

With power applied only to the amplifier under test, a search should be made by adjusting the input capacitor to several settings, including minimum and maximum and turning the plate capacitor through its range for each of the grid capacitor settings. Any grid current or any dip or flicker in plate current at any point indicates oscillation. This can be confirmed by an indicating absorption wavemeter tuned to the frequency of the parasitic and held close to the plate lead of the tube. It would be well to remember that the grid tank coil (or driver tank coil in the case of capacitive coupling) should be short circuited with a clip lead. This is to prevent any tptg oscillation at the operating frequency which might lead to confusion in identifying the parasitic. If any rf is present you have problems and should look critically at any parasitic suppressors that may be installed. The cure here in addition to functioning parasitic suppressors, often lies in the layout, grounding, or shielding of component in the final. Sometimes a major rebuild is the only answer, but this is a last resort.

THE CHALLENGE OF T.V.I (Cont.)

Impairment of the Picture Due to the Radiation of Harmonics

Whenever a signal passes through or is acted on by a non-linear element, harmonics are produced. We may pride ourselves on the linearity of our rf amplifiers, but there is still sufficient non-linearity present in any active element to generate some harmonics. A typical specification for a modern transceiver is harmonic output 35 db below fundamental. This means that a transmitter with a fundamental frequency output of 100 watts can have a harmonic power output of about 1/30 of a watt and still meet specifications.

So why worry about it, it's only 1/30 of a watt. But 1/30 of a watt in a tuned dipole in free space produces a calculated electric field intensity of 127,000 microvolts per meter at a distance of 10 meters or 33 feet. Compare this with typical field strengths from TV stations outside the primary viewing area of the order of 300 to 1,000 microvolts per meter. Obviously severe TVI would result.

Experience shows that the maximum tolerable field strength for harmonic radiation such that no interference results is not more than 1/10 that of the desired signal. For a weak signal, say 300 uv/m, the harmonic level on that channel should not exceed 30 uv/m. This means a reduction is required in our 127,000 uv/m by a factor of 4233, or another 73 db.

The above example, of course, is an extreme case, where all the harmonic power is radiated in the one undesired harmonic, and where the harmonic radiator is an ideal radiator. However, such a situation may be approximated when operating on the low end of 28 MHz and interfering with channel 2 or channel 6 (second or third harmonic).

The most practical way to reduce harmonic radiation to an acceptable level is by the use of a low pass filter. Some of these specify up to 90 db attenuation. However, it is extremely doubtful if the mere insertion of a low pass filter in the antenna feed line will result in anything near the theoretically possible attenuation. This is because practically all modern transmitters and transceivers "leak like a sieve"--in other words they are not in a truly shielded cabinet. The result is that rf, especially harmonics, flows out from the final compartment, through the gaps in the shielding, along the chassis and cabinet, and on to the outside of the coax sheath. From there, it flows over the outside of the low pass filter and on up the outside of the coax sheath to the antenna. Thus, the low pass filter does not have a chance to function. The first step, therefore, towards reducing harmonic radiation is to ensure that the transmitter is in a fully shielded rf tight cabinet.

One quick check of this can be done by using a field strength meter tuned to the harmonic. However, since everyone does not have such an instrument, you can use your own TV set as follows: firstly, connect the transmitter to a 50 ohm non-reactive shielded dummy load. Do NOT use a light bulb. With the TV set connected to its regular antenna, connect a short piece of 300 ohm twin lead to the antenna terminals. Connect the other end to a small 2 or 3 turn loop of wire. This is the probing end. Using the small loop, probe around the outside of the transmitter near any cabinet openings and leads going in or out of the transmitter to see if any evidence of harmonic interference appears on the TV screen. The TV set should, of course, be tuned to a harmonic frequency--channel 2 or 4 or 14 MHz, channel 3 for 21 MHz, and channel 2 for 28 MHz.

THE CHALLENGE OF T.V.I (Cont.)

The TV set will show little if its only input is an unmodulated carrier (fundamental or harmonic) from the transmitter under test. Hence, we connect the probe and TV antenna in parallel so that the suspected harmonic has something to interfere with. If you are a purist, you will probably want to use a splitter or mixing pad.

If there is any evidence of harmonics, look especially for lack of shielding over rf hot components, or failure to close all shielding in a continuous metallic box. Several makes of transceiver investigated had a narrow slot between the top removable shield plate on the final amplifier compartment and the side wall shielding. Even though this slot was less than 1/16 inch wide it was spewing out rf like a fire hose with the tap on full.

When you can probe all around the transmitter with no sign of harmonics, then replace the TV set in its original location with the TV antenna connected and with the transmitter still on dummy load, again check for harmonics. Not until this test has been successfully passed should you count on obtaining any significant benefits from a low pass filter.

Another device that usually provides considerable attenuation to harmonics, in fact to all harmonics and not just to those in the TV bands, is an antenna coupler or transmatch. Sometimes these are just as effective as low pass filters. Be careful here, however, as some published designs for transmatches have taken short cuts, which satisfy the original requirement of "match anything to anything", but are basically high-pass designs and will not help in harmonic suppression.

Sometimes, the physical dimensions of the components in the rf stages and/or their particular layout, result in shunt resonances in grid or plate circuits, which are tuned to the TV frequencies. VHF resonances are virtually impossible to eliminate, but by careful placement of the components and adjustment of their lead lengths, these resonances can be placed outside the TV channels--usually outside of 54-88 MHz and 176-216 MHz. If you have a resonance tuned to a harmonic in the TV frequencies, you will be almost certain to have TVI. To determine if this is the case, go over all rf circuits, especially in the driver and final, with a grid dip meter, checking for resonances. You will find some, but as long as they are outside of the TV channel assignments they usually are of no concern. If they fall in the TV assignments, especially if in channels 2, 3 or 4 try to ascertain what components are determining the frequency, and then adjust the lead length and again measure the VHF resonant frequency. Sometimes the addition of a half or one turn coil in the lead to a component will lower the VHF resonance sufficiently to take it outside the TV band, while not upsetting the normal performance of the stage at fundamental frequency. A point to remember is not to confuse VHF resonances with parasitics.

Eventually, with perseverance (and appreciable good luck) you will reach the point where the transmitter is effectively shielded and where additional attenuation has been provided by low pass filters and/or antenna couplers. However, in spite of your best efforts, you may not be able to eliminate the interference. At this stage it sometimes helps to have a fellow ham who does not have TVI bring his transmitter to your location and check to see if his rig does or does not cause interference when connected to your antenna. If it does not cause interference then you have not completely cleaned up your own rig and its "back to the drawing board", as the saying goes. If the other rig also causes a similar degree of interference as that caused by your rig, then you will have to look further afield for the source of harmonic radiation.

To be continued next month.

(Our thanks to Jack, WA2MEM, for pointing out this FB article for X-TALK-Ed).

SCUTTLEBUTT

1. Heard that Jim, WN2GJH, has T/R Relay switch with "built-in" 4 min., 37 second delay circuit. How else could Jim fail to "hook-up" with WA2SEA on 15 M CW Net?
2. Jeff Ehrenkrantz, WA2LWC, now creating circuit nightmares for Allied Radio Shack as new Technician trainee. Congratulations on the new job Jeff--trust your Amateur know-how will help you over the hurdles.
3. Also good to see another smiling GCARC profile holding-down the counter at Static Electronics. Henry, WB2MSH, looks the part of a smooth salesman and, in fact, he is!
4. Have all you guys given John, WB2JZX, et al, a hand with the float? Why not? The 807's aren't that warm!
5. See where W2FBF "copped" the N.J. QSO Party top score. Well, I had bet 10 bucks Ken would win (would just nose-out WB2WAK); unfortunately, the odds were 1 to 2, so I lost 20 bucks.
6. See where the Pennsylvania Railroad has finally succumbed to public demand that their passenger cars be modernized. They had a really modern, comfy parlor car (with balloon rubber wheels) parked on a siding down in Clarksboro for awhile apparently for public display (funny that the ham radio call WA2OVQ was pasted on one of the windows??).
7. Apparently Jim's (WB2OFR) antenna tower know-how has spread to his neighbor's attention. In fact, they drove him from their midst astride his trusty bike headed for Clarksboro to see the new "Parlor Car". Our advice to Jim concerning this problem is to (a) blow a huge cloud of cigar smoke in their "kissers", and (b) contact WB2WAK who is a real experienced expert on such "neighbor" problems (Paul is moving to where?).
8. Reports exuding from the "float" site suggest that WB2JZX is really in the dog house! Understand that WA2PVH snapped a few "underground" pictures to prove the charges. Looks like former Chief Constantino may have company?
9. Rumor has it that W2PAX has unloaded all his Scuba diving gear and is looking for a new transmitter, etc. Couldn't have happened to a nicer guy, Gurdon.

APOLOGIES

To Jack, WB2WKV, whose FB article on the electronic wrist watch (September X-TALK) failed to carry the WB2WKV Byline. His handle inadvertently was editorialized out and should have appeared with the article. (Don't let this slip-up prevent you from submitting additional contributions, Jack!). (Typist's error, not Editor's).

WANTED

A good, solid auto jack handle. Contact Howard Carter, WA2OVQ, Clarksboro Junction, N. J.

* * *

RAMBLINGS OF A GHOST WRITER

What is the first thing that strikes your eyes when you visit a fellow ham's shack? It's the overall appearance, isn't it? I have been in some shacks that to leave without getting electrocuted was a chore, and one thanked one's lucky stars he could do so. We read about safety, but do little or nothing about it taking it for granted that it is just reading matter and unimportant.

RAMBLINGS OF A GHOST WRITER (Cont.)

It's not necessary to have a large room to install your station, but it is necessary to have equipment installed safely and neatly. I have visited rather small shacks that have the necessary controls and equipment neatly placed and convenient. NO WIRES RUNNING ALL OVER THE FLOOR AND TABLE. I remember visiting one shack, and this fellow prided himself on his haywire hookup! When I looked at his HV power supply, he had wires propped up with folders of safety matches. When I asked him why? his answer was SAFETY FIRST! When one first hears this it appears as a good joke; but this same condition places his life and his visitor's in jeopardy. Now I know that some of these conditions are caused by carelessness while others are the result of not being properly shown the right and wrong way of doing things. A very good program for one of our meeting nights might be devoted to SAFETY AROUND THE SHACK. I know that some of the old timers are going to comment on the idea as being old stuff, but, on the other hand, think of the new members in our club for which it is our duty to properly instruct them.

A few years ago when the electric trains furnished transportation between Camden and the seashore, a third rail was electrified to furnish the necessary power to run the trains. This rail was LETHAL and almost everyone was taught to respect this dangerous situation. Of course, there were those daredevil kids who wouldn't listen to anyone. Well, I saw one fellow who had on a pair of sneakers place each foot on a railroad tie and rub his hand on the third rail. Nothing happened; evidently the ties were bone dry, but should the ties have been damp, it would have been a different story. The very next day and in the same spot a mongrel dog attempted to go across these tracks and accidentally placed one of his paws on the third rail and was killed instantly. Now you are going to say that this kid was lucky; maybe yes, but he was also dumb. It wasn't a case of not knowing the third rail was dangerous, but not believing everything he had heard about it. Where he happened to be the one in a million who got away with it, many did not! Don't think that you know all the answers to Safety. Maybe there is something you know isn't right that you are overlooking and maybe a new eye looking over your shack can point it out to you. Always "BE SAFE".

This summer quite a few kids probed the sands at the seashore for hidden treasures. Many found coins, watches and other trinkets. I found out that they now have clubs, some of them numbering as high as 100 members. The gadget they use is an electronic device patterned after the land mine finders used in the Army. As long as we are an electronic club, I thought that perhaps we may have some members who might be interested in this sort of an enterprise. If we already have some of these Treasure Club members, it would be interesting to hear their experiences.

My ghosts tell me that news is getting to be like quicksilver, it's hard to pick up. So till the next time