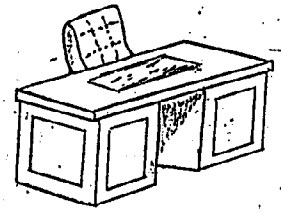
april 92

SPLATTER

This Sardine Wrapper is printed from time to time and distributed to the members of the TAMAQUA TRANSMITTING SOCIETY, Tamaqua, Pa. 18252

SPRING 1992 ISSUE



FROM WHERE WE SIT:

When you opened up this issue of Splatter you should have noticed something different about it. Yes, for more than 25 years the hand-printed slogan adorned the top of page one. For the same number of years our bulletin head also advertised the ARRL diamond. This too, has been replaced.

Our society correspondence stationery has also had a complete overhaul. It no longer denotes of an ARRL Special Service club. Oh ! don't get the idea that any of our programs or activities have been eliminated or deleted. Those activities listed elswhere are the best teaching tool we have. When Field Day is over the Novice and Tecks are noticed to have increased their CW copying speed at least 5 to 8 words per minute.

Our obligation to local volunteer communications has not changed. As mentioned in the last bulletin the main reason for the societies origin was to have the availability of trained personel in case of a real emergency situation. This has proved itself over the past 30 years.

As usual, there has to be a reason, cause and affect for such changes. Being a member and officer of our amateur society it has been noticed at recent meetings and gatherings that there in an unrest and dissatisfaction among the members regarding the American Radio Relay league. It has also been noticed that your comment and ideas have been topics of discussion on the Ham bands and also reflected in our bulletin editorializing regarding League policy and ideas. Also, the closed door policy from section level league officials had a lot to do with these changes. Just tune accross 20, 40, or 75 meters and sooner or later you will find a group talking about ARRL, and most of the conversation is negative in nature.

Differences of opinion and topics of discussion are varied. It might be about how bad QST is and it's contents. We could fill a page on ideas on improvements. One of the most recent items of concern was about the league published manuals for license upgrading. These manuals are priced from 6 to 10 dollars and are only good for about two years. The latest Novice manual "Now Your Talking" will be obsolete after April 1, 1993 and it is priced around $ 20.00.

These are just a few things that are not helping the A.R.R.L, what do you think ?

Play It Safe

All of us have a soapbox item that we feel we have to write about. Mine is safety. This month I want to get on my soapbox for a short time. Please bear with me for a part of the column this month while I editorialize safety.

Several years ago I wrote for the now defunct *CB Magazine*. One of my articles was entitled "Play It Safe . . . Don't Let CB be the Death of You." I think that I should subtitle this column "Play It Safe . . . Don't Let Ham Radio be the Death of You." Since you, the VHF and above operator, are the most likely of the amateur population to experiment with your equipment, it is only appropriate that you know how to be safe. Therefore, what I have to write about will be addressed to you. However, you should share this part of the column with all of your amateur friends (after all, they may decide to read the whole column and ask you what is so exciting about VHF and above!).

As you can guess, the principal theme of this column is safety. I want us to look at the whole amateur radio station, from the outside to the inside, to see where we can be safe or safer than we are presently. When I was a teenager, I was the Safety Officer of the South Bay Amateur Radio Society in Chula Vista, California. One task that I assigned myself to do was to go to all of the club members' shacks and perform a safety inspection. I made a safety checklist from the chapters pertaining to safety in the *ARRL Handbook*. What I will write about is from that experience of being Safety Officer, from experiences of my friends, and from personal experience. Perhaps you can profit from our collective experience.

Some of us like to pride ourselves on having a shack look like Editor Alan Dorhoffer, K2EEK's desk. While Alan's desk does not pose any safety threat (at least as far

Continued on last page

This article was given for publication by N3HHG. Permission has been granted by CQ mag for reprint. Since it is quite lengthy, it will be continued in the next bulletin issue.



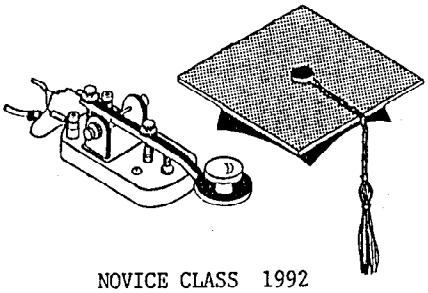
Something Old, something New, Something Borrowed, something Blue, I believe it goes something like that. Well there will be some borrowed, some old and some new , but I doubt if anything blue. What am I talking about!

The editorial staff is planing to print an amateur radio manual, the title or name has not been picked out yet. About 15 years ago Tony W3CMA, now silent key and former society treasurer, asked ye editor to type up all his electric-electronic tricks and have them printed as a Ham publication. We never got around to doing that until a few weeks ago when we got to looking over the back file on "Splatter". While perusing through all those issues came to the conclusion that there was a lot of good information published in those back issues.

There are many do's and don'ts, interesting antenna articles and antenna matchers, tips on generators. Also a number of humorous articles that should not be left go into obscurity. Then there were all those little information sheets that were passed out in Novice class. This and many, many more information sheets we have written and collected over the past fourty or more years. We anticipate at this time to have between 150 and 200 pages of information which will be bound into a manual.

The bulletin printer and I have talked it over and plan .. the first copies available some time this summer or early autumn. There will be a lot of typing and paper required prior to publication so a small charge will be made to cover those expenses.

The manual will have ideas and hints contained therein that have never been seen in print. It will contain some of the old tried and proved ideas which have been improved upon. One section will be on ammeters and test equipment. Many of the topics will be simple but no one ever had taken time to print it in any amateur publication. If any member has any item they would like to contribute get it to us at once. de W3TI



NOVICE CLASS 1992

Our Society Novice instruction class ended Friday April 17 with eight candidates taking the Amateur Entry level exam. We're sorry to report that one of the class did not quite make it.

Those new to be novices are ; Anthony Sfarra Sr., Joseph Guerrero, Verne Waber, Jeffrey Kunkel, Franklin Klock II, Edward Sheganoski Jr. and Joseph Sheehan. The New England Valley will add another key-klicker and the village of Mary-D will have its first licensed amateur Radio operator. All of these neophytes will receive a complimentary copy of this bulletin and are invited to attend our society meetings and other activities. We hope to see them active at our Field Day exercises.



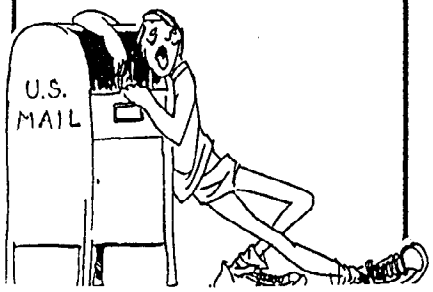
GUNDERSON-PENN-JERSEY
Chapter 33

Not to much to report on the QCWA front this time. Sixteen members and guests were in attendance at the Annual dinner-meeting held April 18 at Luigies restaurant near Belvidere, N.J. An evening of fellowship and rag-chews ensued. The door prize was won by KA3OPX XYL, Vickey.

If you wish to see a longer report then the members better send me some info to write about. All for now------

FOR THOSE WHO HATE TO WAIT

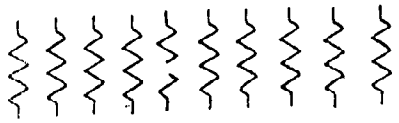
This is typical of our Novice Class students. They ALL PASSED the exam and guess what they are waiting for ! ! !



WHICH RESISTOR

For your next Teck-Quizler there is no trick wording in the question, but just strait forward Electronic measurements with an ohmmeter.

If you have ten carbon resistors marked 1500 ohms ± one percent tolerance. One of the ten resistors is open and measures zero ohms. By making ONLY two ohmmeter tests, locate the bad resistor. (HINT- this one requires a schematic diagram)



Yes, we goofed in the last issue of SPLATTER. We mentioned that the membership list was printed in order of time/date when said member had become an active part of the Society. NOW ! To be truthful to all, we have corrected said list with no favorites shown. Those calls joined by brackets joined the same date/time era. Since the last list we accepted another member.

TAMAQUA TRANSMITTING SOCIETY MEMBERSHIP

April 3, 1992

W3TI	X	Allen R. Breiner I	212 Race Street	Tamaqua	18252
K3NYX	T	Allen R. Breiner II	127 Market Street	Tamaqua	18252
K3NB	X	Dave Evans	18 N. Balliet St.	Frackville	17931
K3KNL	G	Mike Cuttic	750 West Pine St.	Frackville	17931
NI3H	X	Dave Christ	406 Pine Street	Tamaqua	18252
N3HHG	A	Harold Kunkel	420 Spruce Street	Tamaqua	18252
N3HHH	G	Andrew Hitzel	R D 4, Box 4025	Pottsville	17901
KA3WGF	X	Jim Graver	327 Thirwell Ave.	Hazleton	18201
KA3WGG	A	Albert Larichiuta	R.D 1, Box 100	New Ringgold	17960
KA3OPX	G	Danny Yakubisin	700 Garfield St.	Hazleton	18102
NZ3W	X	Bob Petrey	R D 1, Box 1586	Barnesville	18214
W3JWB	A	William Kuhor	1543 Eaton Ave.	Bethlehem	18018
KA3YZF	T	Amanda Petrey	R D 1, Box 1586	Barnesville	18214
N3KCN	T	Judy Petrey	R D 1, Box 1586	Barnesville	18214
N3LBB	T	Joseph Chakan	R D 1, Box 1157	Tamaqua	18252
KB3QW	A	Walt Jones	600 Constitution Ave.	Duryea	18642
KA3SID	G	Wayne Benack	120 East Ridge St.	Coaldale	18218

I C or A C - Last Bulletin Tek-Quiz

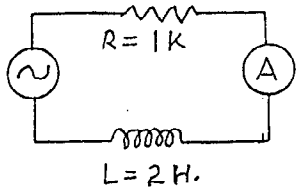


Fig. 1

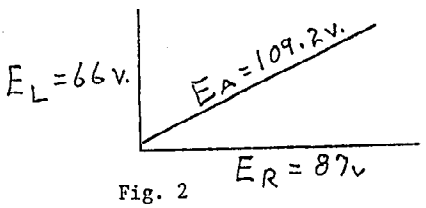


Fig. 2

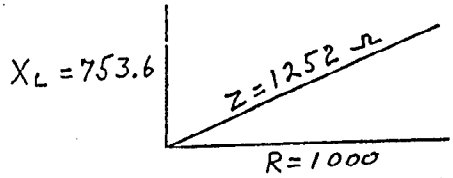


Fig. 3

E_L = 66 v.

E_R = 87 v.

$$E_A = \sqrt{E_L^2 + E_R^2} = \sqrt{66^2 + 87^2} = \sqrt{11925} = 109.2 \text{ volts}$$

$$X_L = 2\,\pi\,F\,L = (6.28)(60)(2) = 753.6\ \Omega$$

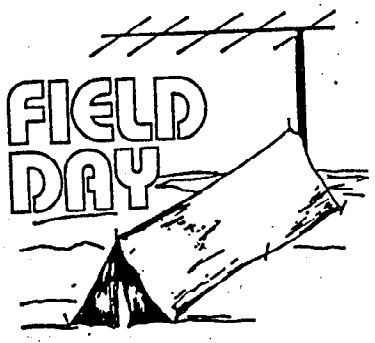
$$Z = \sqrt{X_L^2 + R^2} = \sqrt{(753.6)^2 + (1000)^2} = \sqrt{1567913} = 1252.1\ \Omega$$

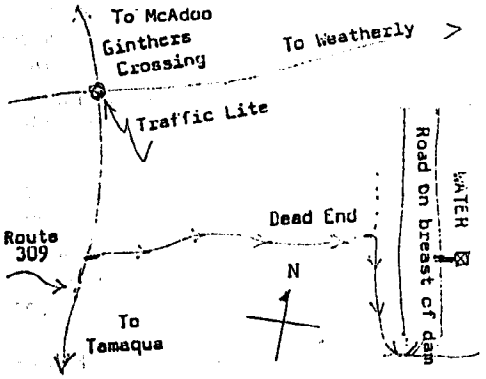
Ohms Law $I_t = \frac{E_A}{Z} = \frac{109.2}{1252.1} = 0.0872$ amp. = 87 ma.

If you did all of the above you should have calculated an answer of 87 milliamperes.

SORRY YOU ARE WRONG !

The original question states "How much current would be indicated on the ammeter ? " In this case the ammeter would read ZERO current because there is no such an item as a series connected ammeter for A.C. current.





Each year we receive reports after Field Day is over,"I drove up route 309 but couldn't fine the Field Day site."The map above has been prepared for those who have a tendency to over shoot or have a habit of getting lost.

Driving north from Tamaqua after you pass the second traffic light look for the Red-Yellow-Green traffic light INDICATION sign just before you start heading down hill. Turn right and follow that macadam road to a dead end. Turn right and head up hill. At the top of the hill make a U-turn and you will see the field day site.

IF your doing 60 and pass the turn-off road and you come to the third traffic light, YOU WENT TOO FAR. Turn around and try again.

Field Day plans will be completed at the regular meeting June 5th.

Oh ! Those coming from the north, after you pass the traffic light at the foot of the Mile hill. Go down the dip and about 3/4 way up the hill look for a left turn into the road leading to the dam, then follow the same instructions as given above.

REMINDER INFO to K3NB - K3KNL Field Day is June 27 and 28 this year.

V H F QSO PARTY

To date a number of members have confirmed their attendance to this affair. Plans are to set up the antennas and equipment on the evening of Friday June12. Final plans and details will be given at the June 5 regular meeting, de K3NYX.

A QST QUICKIE

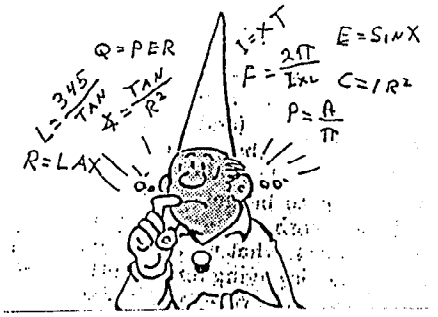
What if your QST doesn't come ? Call ARRL at 203-666-1541 ask for the circulation Dept. They'll verify your membership and send you another copy.

MEETING NOTICE

The next regular business and planing session will take place at the Tamaqua Italian Club on June 5. Question of the month - Will we get to see what our president looks like ? ?

HAMFEST

The annual Hamfest will be June 7 but the set-up committee will meet at the Hamfest site Saturday evening at 7 PM to prepare the site.



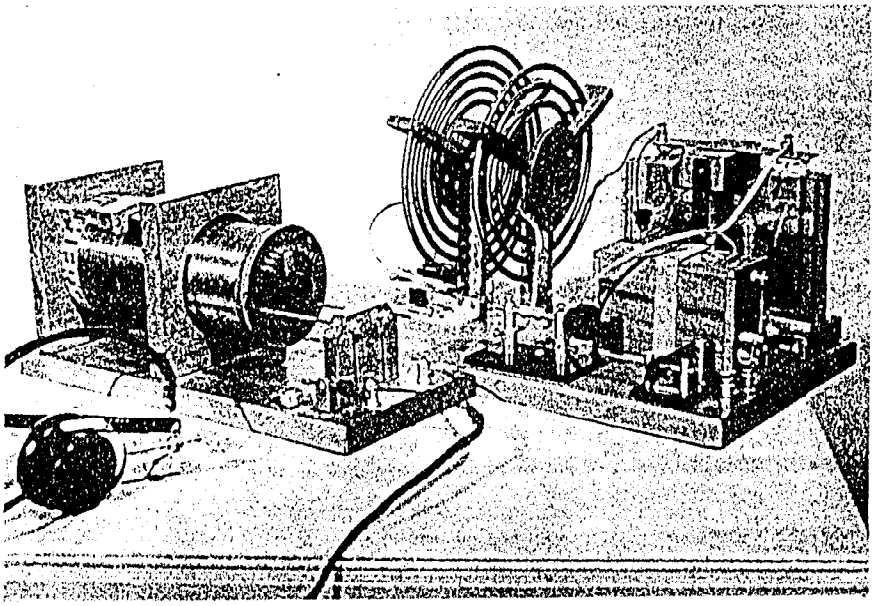
ADVANCED CLASS ANYONE ?

If you are interested in an Advanced course to start in September, you had better let us know post-haste. We'll have to contact the school for a room. Final date June 28.

YEARS OF YORE or BACK TO BASICS

Those of you that saw and heard my 1914 crystal detector receiver know that I was not pulling your leg when I would expound with stories of my teen-age experiences with Wireless. The following Build-it article is a reprint from a recent Antique Wireless Association bulletin. It is similar but more refined model of the receiver I made back in the late 20's early 30's. Build one for yourself. It works, no batteries required. De W3TI

BUILDING A 75-YEAR-OLD AMATEUR STATION



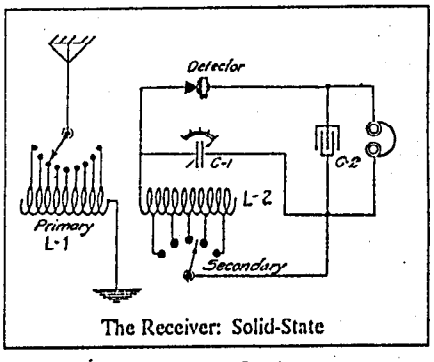
If you have a few wood-working tools and a friend who can turn some metal parts on an engine lathe, you can build a working replica of a 1914 amateur station.

The loose-coupler crystal set is quite conventional, including the oatmeal-box coil. The crystal detector, binding posts, and switch points can be found in the junk box. If not, there will be a need to make them on the lathe.

The spark transmitter calls for a little planning. The oscillation transformer (OT) is made of 1/4" copper tubing since old-time flat stock is not readily available. The number of turns is not critical since the set is only for display.

The high-voltage condenser is made of tinfoil with six to ten plates of thin glass as dielectric. (4" x 5" photographic plates were used in the old days.) If tinfoil is not available, one can use thin sheet brass or aluminum. The high-voltage source is a Model-T spark coil.

The porcelain-base straight spark gap can be found at an AWA flea market. Otherwise, the parts can be made of free turning yellow brass mounted on a piece of bakelite. You may prefer to make the electrodes of zinc for authenticity. Power source? Try a 6- to 10-volt transformer with diode rectifier. Vibrator spark coils don't like AC.



The Receiver: Solid-State

L-1,L-2 Many many turns of wire.
C-1, 300 to 400 pf. variable condx.
C-2, .002 to .005 mica cap.
Detector, 1N34 or similar diode.

Continued from page one

as I am aware, OSHA, the Occupation, Safety and Health Administration, has not condemned it), your messy shack does pose a threat. There is a Chinese proverb concerning a disaster looking for a place to happen. Your messy shack has found that place for the disaster to happen.

Your Antenna Installation

Let's look at the shack from the top down, by starting at the antenna. Before beginning any work, you should plan every step. You should draw a diagram and a plot plan showing the location and height of the antenna support, the length of guy wires, and the location and relative height of any power lines. The foremost thing to remember about antenna installation is the power line. According to OSHA, the minimum distance between an overhead power line and your antenna is 10 feet. Your local ordinances may require a larger separation. Check with your electrical utility company for the regulations in your area. You should look at wherever the power lines run and plan as if your antenna were to come down. If your antenna is higher than the power lines, ask yourself if it will fall into them on its way down. If you are planning to install your antenna on top of a dwelling that has a service drop from the utility pole, ask yourself if your antenna will fall on or anywhere near that service drop.

Next you should determine the kind of support you will use for your antenna. The light weight of many VHF antennas allows for the relative easy use of push-up or telescoping masts. Many times these masts are installed on the roof of a dwelling.

First, if you are going to install that mast on the roof, I would recommend that you not use a mast longer than 30 feet. Although masts come in telescoping sections that reach a height of nearly 50 feet, the extra 20 foot makes the installation potentially very unstable for the amateur installer. The 27 or so feet of the mast, coupled with the usual 15 feet of the peak of the roof, places your antenna up around 40 feet. That is plenty high enough for most casual weak-signal work. In fact, Mark Ammann, KM0A, has worked almost 300 grid squares on 2 meters with an antenna installation of a height of less than 30 feet and 150 watts! Also, use a new or undamaged mast. If it is damaged in any way, discard it.

Next always have a buddy with you. *Any* antenna installation goes easier and is safer with someone helping you. Also, you and your buddy should wear hard hats. Something you aren't expecting to be above your head may find your head as a target.

In order to extend the mast, it is necessary to climb up a ladder to reach the top of the mast and pull up. Always use an electrically safe ladder for any antenna work. One made from wood or a nonconducting material will be satisfactory. Your buddy should hold that ladder steady all of the time you are on—even when you are on the first step of the ladder.

If you are going to install the mast on the roof, make sure the roof is safe and dry. If it needs repair, stay off until it is repaired by a skilled person. If it is wet, stay off and fill out QSL cards. When you go up on the roof, take a handheld with you. It may be a bit embarrassing to ask someone on the repeater to come over and pick up and reset the ladder for you. However, it is far safer than your jumping off the roof and resetting the ladder yourself.

Remember, when you are on the roof, you can fall off. Know where cables, guy wires, and tools are with relationship to your body. Wear shoes that have the necessary traction for walking on the incline of the roof. If the incline is too steep for you, stay off.

When installing the mast on the roof, make sure that the bottom of the mast has no way to move. Use a tripod that is securely bolted to the roof and supported from underneath the roof with reinforcement to secure the mast to the roof. Before you put the rotator and the antenna on the mast, calculate the amount of guy wire you need to reach the top section of the fully extended mast. Do this beforehand as a part of your project diagram.)

Next carefully extend the mast, without the rotator or antenna, and attach the guy wires to the guy points securely but with enough slack so that the mast is not binding when it is fully extended. Now you can install the rotator first, then the antenna. Do not attempt to install the rotator and antenna simultaneously.

Never install an antenna that is too large for the capacity of the mast. If you have some doubt, go to a place that sells television antennas and look at the largest log periodic they sell. If your antenna is bigger than that, use a tower or some other support. That long boom antenna may seem relatively light when you lift it. However, it presents a tremendous torque when whipped back and forth by 60 MPH winds. There is enough torque to damage the rotator and cause the antenna to freewheel on the mast or even to twist the mast. If you want to install a long boom antenna on the roof, use a properly installed and guyed roof-mounted tower and a mast with a minimum outside diameter of 2 inches. Always use a rotator that can support the wind load of the antenna. Always use guy wires that can handle the wind load of the antenna, rotator, and mast. Make no compromises on anything *ever.*

Once the antenna is in the air, make your mast turning adjustments for calibrating the rotator control box. I have found that a large pipe wrench snugly affixed to the base of the mast makes this job very easy. Then tighten the guy wires and the bolts on the tripod to secure the mast.

Finally, you have now created a lightning rod with your antenna/mast installation. Therefore, attach one end of a number eight size wire to the base of the mast and connect the other end to an earth ground via the shortest path possible. An earth ground is an 8 foot long copper rod pounded into the ground its entire length. I know that after 6 feet the hammer and arms are very tired. However, you must resist the temptation to saw off that remaining length above ground. Use no substitutes for a proper earth ground.

If you are planning to put up a tower, first check with the local authorities about engineering requirements, zoning regulations, and restrictions concerning tower installation. Always use a tower and rotator strong enough to withstand the wind load of the antennas you are installing. If your tower is to be guyed, make sure the guy wires are the proper strength and will not travel into power lines should the guy wires snap. Carefully follow the manufacturer's instructions when installing the tower. Also, consult the *ARRL Antenna Handbook* as a source of background information while you are installing your tower/antennas. The first chapter is on safety. Before proceeding with any work, you might want to read that chapter.

Throughout this and any antenna installation give yourself plenty of time to complete the installation. Take your time putting the antenna up, and keep your mind on your work. It is not a good idea to be putting up any antenna hours before you absolutely have to use it. I know that Field Day or a big contest encourages swift emergency-type installation of entire stations. However, I think that it would be prudent to go through a dry run exercise prior to quickly installing any antenna setup. This way you can go slowly and work out the bugs associated with that particular installation.

If you are planning to work during a time of the year when it is hot, have plenty of thirst quenchers, juice, and bananas available. Take frequent rest breaks and replace your lost liquids and potassium with the above drink and food items. Sodas and beer are not good sources of the nutrients your body needs under these circumstances.

Continued next issue