April 93

SPLATTER

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

1993 SPRING ISSUE 1993

EMERGENCY COMMUNICATIONS

During the early years of wireless (1898-1918) those pioneer operators were interested only in communicating, talking to some one via wireless. It wasn't until the sinking of the Titanic that any thoughts were given to use Wireless as a means to save lives. It wasn't long before wireless stations were installed on merchant, passenger, and ships of the U.S. Navy. Wireless or Radio now had a new reason for its existence.

During World War I all Amateur radio activity ceased by order of the U.S. Government and Ham operators were soon active again in the Army Signal Corps. After the War to end all Wars it was through ARRL that our amateur bands were given back to us. Ye editor didn't come into the act till around the early 30's. By that time the League was beginning to think "Emergency Radio" and their early June Field Day exercise stressed operating under simulated emergency conditions away from all commercial power sources. Equipment was crude, made for in-house operating and not out in a tent during a cloud burst. Then it was called "Field Day, a test of emergency equipment". Today they call it "The Annual Field Day Contest", which is just what it has turned into, a contest of who can put the strongest KW on the air. Do you realy believe they would run a KW during a real emergency ?

It wasn't until August 18, 1955 when Tamaqua was flooded, a life was lost and no telephone communications. That is when ye editor got emergency radio minded. The charter members of this radio club organized the club with the sole purpose to supply Tamaqua with a source of trained communicators if and when an occasion arose that they were needed.

Ye editor was acting as the Emergency Communications Director with no authority until 1974 when Mayor William Yost appointed me officially as the Tamaqua Emergency Communications Coordinator. A new organization was implemented, Civil Defense, (Now EMA). Tony Sarli, W3CMA was CD director. With each of us starting out with a new program, we both learned from each other and the local emergency system was a success. Since Tony became a silent key there had been two other CD directors with whom we worked and shared ideas.

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K U D O S

To each and every member of the Tamaqua Emergency Communications team. You will always have my admiration and respect. W3TI

OUR MOTTO

We the willing, led by the unknowing
Are doing the impossible
for the ungrateful.
We have done so much for so long,
WITH SO LITTLE
We are now qualified to do anything
WITH NOTHING.



GUNDERSON-PENN-JERSEY
Chapter 33

Nothing really startling or note worthy has happened since our last bulletin report to you. I got a reply from QCWA headquarters regarding a number of questions I sent with our annual report in December. It only took ten weeks for them to make the reply. One question answered, we can purchase a replacement banner for $ 100.00 instead of the previous quote of $ 200.00.

Over the winter months our chapter president W2WIY had a lengthy stay in the hospital and now recovering. Our treasurer, W3APE, collected enough dues that he and XYL spent the month of February in Florida. Snow Birds W2DGE and company are not expected back north of the Mason-Dixon until the spring thaw. Occasionally I tangle with W3HK on the finger wiggling traffic nets. Al Jr. K3NYX has been waiting for enough snow fall to try out his radio control model plane. He replaced the wheels with skies. He might get his wish because while I'm writing this article we have over two feet of snow with more coming down. Ye editor just got over the Bug and now the XYL N3FXG has got it, so we are sorry to have missed the March luncheon.

If you are one of the few chapter members that forgot about 1993 dues, this could be the last bulletin you receive. For dues info, see last bulletin.

See you all when we get back from the Dayton Hamfest.



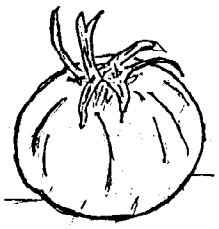
FROM WHERE WE SIT

Last year in the Fire Cracker issue of SPLATTER we printed a question evaluation sheet. Membership response was about minus five percent. I believe I got 3 returns. This tells us one thing.... No one wants to fill out evaluation sheets.

We then decided to give you a "Type Yourself" questionnaire. The answers are easy, either a YES or a NO is all that is required.

1. In the past year have you had 5 QSO's with hams other then your little net, or repeater group. YES-NO.
2. In the past 5 months have you helped International relations by making 5 QSO's with a foreign country. YES-NO
3. The week end comes and you find your favorite band overrun by a contest. Answer YES if you join and give them a few points. Answer NO if you get disgusted and shut down the station.
4. Did you make at least ten CW QSO's in the past year? YES-NO
5. In the past year have you checked up on the latest FCC rules (Part 97) They may surprize you? YES-NO
6. In the past 6 months have you studied to up-grade your ticket? YES-NO
7. Do you swap QSL' cards regularly ? YES-NO
8. Do you take an active part in Society meetings, committees etc. ? YES-NO
9. Do you have additional equipment to double check your station, such as, SWR bridge, a scope for splatter and linearity or flat topping, over deviation etc. A power out-put meter is now required by FCC regs. YES-NO
10. Have you recently made a home brew project for the shack (Electronic Computers excluded) YES-NO

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THE GREAT TOMATO RACE

The subject was brought up at the March meeting whether we were going to run the "Great Tomato Race" again. With so little participation shown last year we were going to scrub it for '93. Then after due discussion, the members present said, run it again.

SOoooo - The rules will be the same as last year. You must grow your own tomato entries. Judging will take place at the September 3rd. meeting. NEW RULE - there must be more than three entries for judging. All entries become the property of the society. Again, tomato sandwiches will be served after the meeting.

DID YOU KNOW

Tamaqua was the third community in the United States to have electric street lights ! The installation was supervised by none other than Thomas Edison himself.

And that William Hammer, born in Cressona, Pa. in 1858 became a laboratory assistant to Edison in 1879 at the age of 21. Two years later he became chief engineer of the Edison Lamp Works.

WE SIT - Cont'd.

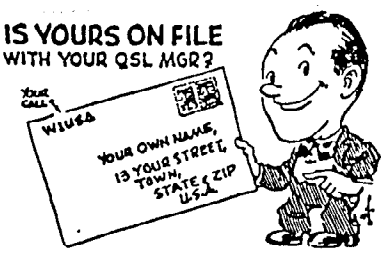
Now grade yourself. Ten YES answers ears you the GOOD HAM award.

8 or 9 YES's Good, but not good enough. Check the No's, and correct yourself.

6 or 7 YES's, Not to hot, you're just not with it.

5 or less - - Why not consider weight lifting, stamp collecting or girl watching. That will benefit you greater than Ham Radio.

NO-CODE tecks, Check number 6 and stick with it. Don't give up.



ORIGINS OF TECHNOLOGY

HEINRICH HERTZ 1857 - 1891

THE UNIT OF ELECTROMAGNETIC WAVE FREQUENCY

He died at the age of 37 of an infection caused by an abscessed tooth, a malady which today could be corrected by a shot or two of antibiotic. But in a period of less than 10 years, first at the University of Karlsruhe, and then at the University of Bonn, he demonstrated the existence of radio waves, as foretold by Maxwell 20 years earlier, and determined experimentally their basic properties.

Hertz started out to become an engineer with both academic and on the job training, but after a number of years, including his mandatory military obligation, he switched to Physics and received his Doctorate in 1880. While his specialty was scientific, his love of engineering stayed with him. He was not interested in theory alone, but enjoyed experiment. He had a home workshop and built his own experimental equipment, most of it wonderfully simple - a true ham in many particulars.

No one had been able to establish an experiment to substantiate Maxwells's equations. Hertz was aware of the oscillatory nature of a spark discharge.

Hertz designed an experiment to determine (1) whether radio waves existed and (2) whether their speed was as Maxwell theorized 300,000 km/second. For a transmitter he used a simple spark gap dipole as shown in Figure 1. When the mechanical interrupter was opened or closed, a spark

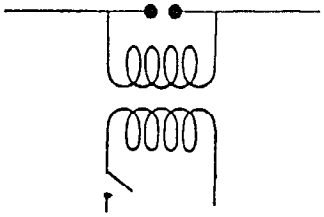


Figure 1

jumped the gap. The frequency of the discharge was determined by the constants, i.e., inductance and capacitance of the dipole. For his first experiments this frequency was about 50 MHz; later he worked on 100 Mhz and 60 cm. He was truly the first Vhf experimenter.

Peak output was about 16 kW. For a receiver he used a simple loop with an adjustable gap of a few millimeters width. His only instrument for measuring reception was his eye. Figure 2 is a diagram of the receiver. By adjusting the width of the gap until it just failed to break down he had a rough measure of field strength. The reason for the high power of the transmitter is

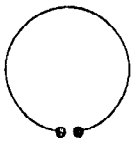


figure 2

apparent when one considers that it takes a lot of transmitted power to build up the voltage necessary to jump the receiver gap.

Now as he knew the frequency of the transmitter, if he could measure the wavelength, he could multiply these quantities together to get the velocity of propagation. He could measure the wavelength. Using a transmission line technique creating standing waves, he was able to measure the nulls and came up with a half wavelength distance. Using this figure and his transmitter frequency he came up with a velocity of 280,000 km per second, which is not too far from the recognized velocity of 300,000. Later he found an error in his transmitter frequency which when corrected, put his results very close to the velocity we measure today.

Now if electromagnetic waves are indeed waves they should show phenomena associated with waves such as reflection, refraction, and polarization. In these experiments Hertz went to higher frequencies including 60 cm in order to make his equipment less bulky. He was able to demonstrate that electromagnetic waves did indeed have these characteristics, all by simple experiments.

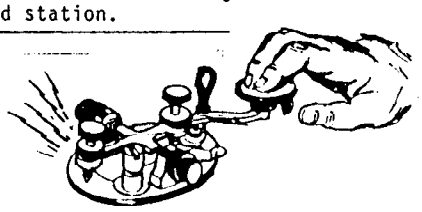
It is interesting to realize that Hertz was a pure scientist and had no interest in the use of electromagnetic waves for communications purposes, nor was he interested in patents. He did his experimental and theoretical work, published his results for the evaluation. Also the VHF frequencies he used were not exploited for communications for 50 years, nor was some of his work on slotted lines. But there were people out there who grasped the commercial and military possibilities, one of them a young Italian, Guglielmo Marconi.

WARNING - WARNING

Do you recall the old Boy Scout phrase, First Aid always comes last. Well not always, when termination comes first. To you that have an electric typewriter or computer I suggest you disconnect it from the AC line when not in use.

A few weeks ago the area experienced heavy snow accompanied by strong gusty winds. That wind velocity caused primary power lines to come in contact with each other and your lights blinked and occasionally you lost power. When high voltage power lines touch each other an extreme high current surge is reflected back through the system. This surge is called a Glitch and only last a few micro-seconds, but just long enough to put the Kei-Bosh to the memory portion of your computer or electronic typewriter.

How do I know about this ? This printed page is being done on a new word processor typewriter. The previous one didn't get to the First Aid station.



Cont'd. from page one

We now have EMA Director number 3 who was appointed over two years ago. Since his appointment he hasn't talked nor called on our emergency group at any time to pass on his ideas or ask us how we could assist him. It seems like he just set our team aside. Inter-communications were nil.

During the recent EMA drill of February 23rd. our Tamaqua EMA team was made a COMPLETE fool of. Our team had eight members mobilized for the drill and the new director set us aside while a minimal number of out-of-the area operators tried to do the job. What happened, Had he lost all confidence in his own group of communicators ?

Comment and reports from those that did participate are filtering in and they even agree, they too were not utilized to their fullest capacity and past experience. All agree, the exercise was not even a good Chinese Fire drill.

The question now comes to mind, what has happened to our emergency communications system over the past decade ? One of the things noticed is when a volunteer group has been taken over and managed by a paid authority, things begin to deteriorate. The volunteer knows his assigned job and requirements while the paid management sees only dollar signs and a chance for glory. Therefore we conclude that it is true, you can't put Lions and Tigers in the same cage, by the same token, Oil and water won't mix. Is it time for another change ? So let's get paid Radio Communicators for any future emergencies.

THE ADVENTURES OF BUDI AND KATE

When last we left Budi and Kate their small craft was hanging at a 45 degree angle, tethered by the rope tied to the bull-horn on top of the canal wall and it looked like the hard earned vacation trip of our duo was about to terminate in a wet ending.

However all the work hands around the canal have had previous instruction and had similar such experiences, such as in the case of Budi's dilemma. So it came to pass, an alert young canal lock worker was prepared for just such emergencies. Wielding a sharp axe, he made one swing at the rope which resulted in the bow of Budi's craft to drop at the rate of 32 feet per/second/per second, ending with a very loud KERSPLOOOOSH. Experience has always been the best teacher and Budi didn't tie up again for the balance of the trip through the canal.

The balance of the trip through the canal was very scenic, enjoyable and uneventful. Then while sitting on the Pooup deck one evening Budi got aterrific idea. He noticed a rope hanging from the aft-deck of the Aircraft Carrier. It was dragging about 150 feet behind the carrier. It was probably left hanging by one of the seaman on the flight deck. Budi grabbed the rope and tied another 100 feet to it, the other end was lashed to the bow of his 35 footer. Hence, when the carrier moved through the canal, so did Budi and Kate.

It was at one of the lay-overs Budi had chance to get ashore and perchance had a chat with some of the carrier's crew. Seems like they were heading for Pearl Harbor which was right next door to Budi's destination, Hawaii. This spawned another of Budi's great ideas. If he left the rope tied to the carrier he would get a free tow job all the way to their Vacation Paradise.

They were one day out from the canal and somewhere in the Pacific being towed - - all going well. Night time came and the duo sacked out for a good nights sleep (?????) since they had no need to navigate. At the rate they were moving they planed to be in Hawaii in another 24 hours.

Well the fickle finger of fate had other ideas. Around 0600 UTC (1 AM PST) the Skipper of the carrier got a radio message to change course south-west to the Philippines to help in the evacuation and moving of the U.S. Naval base. Being in the "Land of Murphy", Budi and Kate, unknowingly were headed in the same direction

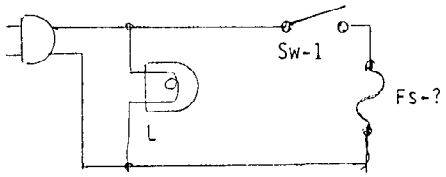
As the sun rose that morning a Navy crewman happened to notice the drag-line, saw Budi's craft in tow. In order that he would not get called before the mast, he decided not to report the incident and cut the rope which left the Duo stranded some where in the middle of the Pacific Ocean.

More on the Adventures of Budi and Kate in next issue.

ANOTHER BUILD-IT PROJECT

How often have you blown a fuse in your rig or mobile 2 meter unit and when you find your collection of fuses [very shack should have at least half dozen different value spare fuses] The first one you replace is a bad one. This simple tester will eliminate any doubt in the future whether the fuse was good or bad.

Parts list:
Pl- AC Line cord plug.
L - 15 or 25 watt light bulb
Sw-1 Single pole Toggle switch.
Fs-? Fuse holder for unknown fuse.



Instructions for use.
Insert the fuse at Fs-?. Plug the unit into any 115 volt AC receptacle. The lamp should light up. Close switch Sw-1. If the fuse was good the lamp will blink momentarily. The lamp will not blink if the fuse was bad to begin with. Since 115 volts house current is used the unit should be built in an insulated enclosure.

SOCIETY OFFICERS

President N3HHH
Vice Pres. N3LBB
Secy-Treas. W3TI
Activity Mgr. K3NYX

Regular monthly meetings held on the first Friday of each month at the Tamaqua Italian Club, 8 P.M.

ADDENDUM

Sorry, We forgot to name the writer and designer of the "Build It Project".
His name is A. Prilfuel



WE CAN'T USE A RADIO TRANSMITTER BUG-- THE F.C.C. TOOK OUR FREQUENCY AND SOLD IT TO SOME SHIPPING OUTFIT!