SPLATTER

This bulletin is printed from time to time and issued to the members of the Tamaqua Wireless Association a Public Service non-profit organization

October November | Autumn Issue | 2003

Things Yet Undone

By TWA President, W3ZRQ

It seems we went right from winter into autumn because there was not to much spring or summer to speak of. The little bit of summer we did have has come to an abrupt end and within the past few days you could see the weather changing, Autumn 2003 is finally here. So far the club has had a very active year and it is not over yet. A few members expressed an interest at the last club meeting to enter the 46th Annual PENNSYLVANIA QSO PARTY as another TWA club event. The PA QSO Party is held each October and sponsored by the Nittany Amateur Radio Club of State College, Pa. If the weather holds up and is nice for the weekend, we plan to operate at Weicker's Wacky Woods using the club's trailer as a base of operations. Mark your calendar for October 11th and 12th, 2003. Operating times are 1600Z October 11th to 1500Z October 12th and 1300Z October 12th to 2200Z October 12th.



The committee plans to make up an operating schedule that would allow everyone present to have operating time. If you are interested please contact any club officer and let them know and you will be put on the schedule. Complete rules will be posted at the club trailer the weekend of the event. We may have to set up two stations running 100 watts. While an operator and logger are working the station, the rest of the members can relax by the campfire and burn sneakers.

Another event scheduled for October 25th is the Annual Grave Dig 2003 that is always fun. Anyone interested in helping out can contact Gary KA3FUL at the next club meeting October 12 and get the full scoop from him. The final event for October is the Tamaqua Halloween Parade scheduled for October 28th. See elsewhere in this issue for details. Don't forget. Public Service is our Motto

With only two more months after October, we still have a few more activities left such as the VE Testing November 1st. at the Tamaqua Municipal Building preregistration not required, But you must get your name on the list for table space at the TWA annual Christmas Party December 13. Make sure you check the calendar of events and Xmas Party registration printed on the mailing cover page and mark them down so you don't miss anything.

Enigma of a Travel Trailer

Editor W3TI

As introduction, I was put on the Pennsylvania highways about 15 years ago and was seen at many, many trailer camps. Some for just an over-night stay and others for a whole week.

I'm only 21 feet long and had room to sleep four people. I had a full shower stall, toilet, wash stand, and vanity facilities. Hot and cold running water, Gas stove, and refrigerator. I am equipped with 120 volts for lighting and wired with a 12 volt back up system when 120 volt line is unavailable. I was decommissioned about 3 years ago and put in storage in the Owl Creek area of Tamaqua.



Getting back to real time, it was during the winter of 2002 following the 9-11 terrorist disaster the idea was bandied around about acquiring a trailer and converting it into a portable Emergency operating center. After seeing what KA3FUL and N3HHH did with a trailer they converted into a portable amateur emergency station sorta gave our group the incentive to follow along the same lines.

The word was passed around through out the community we were looking for a trailer in fair condition that could be renovated for our particular use and the offers began to show up. Out of three that were in fair shape I was picked as being in the best condition and easiest to convert. I was commissioned again in early July 2003 and my tow bar hitched up to the back of a pick-up truck and hauled to my present location in Locust Valley. Then they closed my windows up tight and set off three disinfecting, bug killing fog bombs and left me sit, locking the door behind them.

Outwardly I look the same as before. One nice thing they did was give my roof a new coating of Aluminum Asphalt roof paint. Then a group of hatchet-men descended upon me and in one week end had literally and completely gutted my interior. My insides were a complete shambles.

First they tore out all of my plumbing, shower stall, commode, vanity and wash basin. The over the counter exhaust fan and stainless steel sink pan and drain pipe is still there in the event they have some dirty dishes to wash. The gas heater is gone and will be replaced with base board electric heaters. They kept my bunk bed and sleeping quarters.

Continued on Last page

TWA Annual Xmas Party December 13

Yes, time really flies when your having fun. Those who have attended our final activity for the year know all the tall stories and fun we endured the previous twelve months. Each year brings forth something new or different, but you need to attend to know what happened.



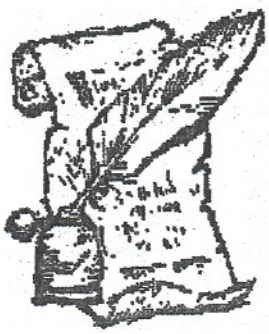
Each year we asked you to contact the club secretary if you plan to attend. Each year attendance has increased as well as our club membership. This year in order that no one is disappointed we MUST know your intentions in advance and have a definite "yes" for a head count of who and how many to prepare for. I hate to stand in the doorway and say " *There is no room at the Inn*", or *"I don't see your name on the registration list"*.

This year the Christmas gathering will be held Saturday December 13 at Martha's Restaurant on Lafayette Street , Tamaqua. Happy Hour and socializing begin around 5:30. We try to get each meal ordered in advance so the cooks can have them prepared and served at 7 o'clock As in previous years there is a cash bar for refreshments and everyone orders from the menu for your choice of entrée.

For your convenience we have printed a registration form on the mailing cover page of this issue. We must give the restaurant and your program committee a few days for preparation, all who plan to attend must send the registration form to the secretary before 12 noon on December 7.

Hence, all future club activities where prior preparation is required for food or seating, shall be by reservation. If any member has a better or more applicable solution please step forward and let yourself be heard.

Nomination of Officers October 17.



In accordance with Tamaqua Wireless Association constitution and bylaws members can make nominations for the office of President, Vice-President, and Secretary-Treasurer at the October 17 business meeting. Coincident with election time for the government of the United States, Election of officers for TWA will be held at the November 21 meeting. In the event there is any office where no nomination is made in October, that office may be open for nominations at the November meeting. Installation of officers is always held at the December Christmas gathering.

Past Present & Future

Club Activities

During the winter of 2002 TWA sponsored a class of instruction on Operating during an emergency and traffic handling. Out of 15, only 12 finished and received certificates of completion. Since then we had the 9-11 event, an East coast black-out and Hurricane Isabel. Members attending the September meeting thought it would be a good idea to hold a refresher course this winter. If interested please register before the end of December. Classes will begin in February if there is sufficient interest.

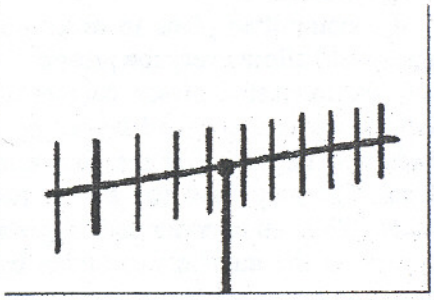
In the Spring of 2003 W3TI set up a computer run Morse code practice program and ran it for ten consecutive Saturday evenings on the 147.345 Mhz repeater. The results were fruitless and the time and effort setting up the program were just wasted.

You will see Chapter 3 of Electronic Basics and Fundamentals in this issue. So far I had comment from one member interested in these articles. Evidently not to many are interested in that old stuff so we may as well use that page for something else and forget about chapter 4 and 5.

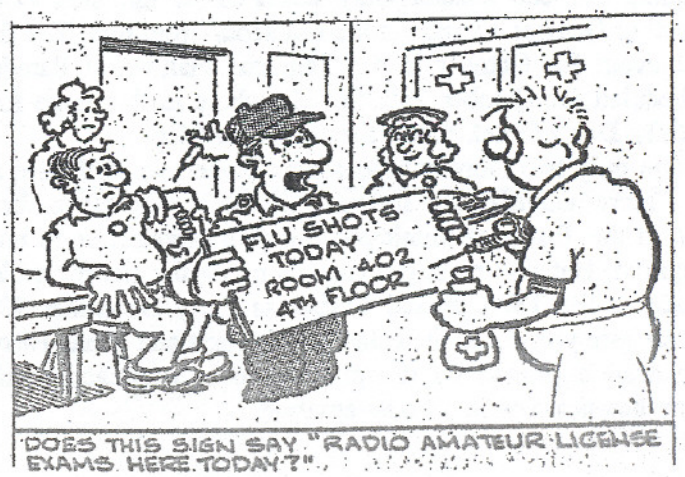
Presentation on Antennae

By Eugene Mason KZ5V

The program for the October 17th. meeting will be on Antennas. Gene, a new member of the club, is well versed on the subject of R. F. Transducers and has volunteered to give us some straight dope on antennas. Gene comes to us from Texas and is an Electronic Engineer retired.



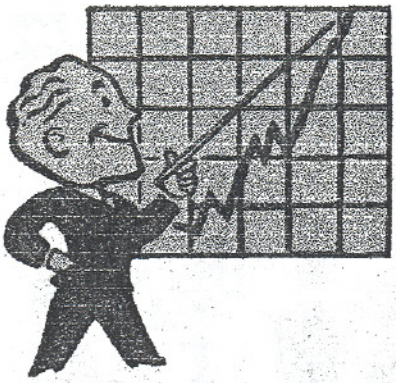
Part of his rendition will be on Dipoles, Inverted Vee, Yagi's, Quads, and Verticals. His specialty is "Wire Antennas". You won 't need to take notes because he will have hand-outs on each subject. I'm sure all of us could use a little extra refresher on antennas. Let's have a good turn out for the October meeting.



"My Friends"

I wonder how many of you are old enough to remember the era of U.S. President Franklin Delano Roosevelt ? Once a month he would broadcast a radio message to the people and begin by saying, "My Friends". Therefore assuming he had some friends in the listening radio audience.

When you first became interested in amateur radio and were invited to attend our Radio club meeting, at first glance we were all strangers and later when you got to know each other you formed a bond of friendship with each of the members.



During the early 1930's "Will Rodgers" a philosopher and comedian who had a half hour weekly radio program. I recall him saying, "I never met a man I didn't like", but he never finished that statement. It was after he got to know the person for awhile, he found out what kind'a horse's rectum he was.

I'm happy to announce, the above statement does NOT pertain to any of our present members in the Tamaqua Wireless Association. I hope to maintain the friendship of every club members as long as I'm around. This having been the third year we held Field Day exercises and other TWA outings at Weicker's Grove, we had a few of our Amateur Friends (non-members) attending who took the liberty and advantage of our food, refreshment, and other facilities as if they were a full fledged member of the club.

Case and Point made. Before each of us became a member you filled out an application form and was voted into the club. In addition to that, both you and I make an annual donation of ten dollars to help defray any club expenses. With inflation increasing each year we've seen an increase in those expenses. Would you believe the cost for Field Day this year was $ 180.00 .

Our Annual Family picnic (Members and Immediate Family only) with an estimated cost of $100.00. This is followed by the TWA Annual Christmas party in December, also an organized club activity designed for members and family only. We are not a large club in membership but when our members require assistance help is always there and you can't beat the fraternalism, we have a good thing going.

"Let's Keep It That Way.

Prior to writing this article a detailed explanation and invitation was presented to each Field Day visitor and given the opportunity to apply for membership. Would you believe it ! Not one accepted the invitation. If the time comes when we open up the gates and invite all the Free-Loaders to join, we won't have enough room in the grove to park.

Only those who will risk going too far can
Possibly find out how far one can go.

Be Prepared

If you happened to belong to the Boy Scouts of America in your younger days you will recall the above slogan "Be Prepared" is the Boy Scout Motto. Being prepared also plays a very important part when it comes to the duties of a club official, namely, the President, Secretary, and the Activities Manager. Each have certain responsibilities and if they attend a club function or meeting unprepared, it ends up as a Chinese Fire Drill and nothing is accomplished.

Let's switch sides for fifteen minutes. YOU take over the responsibilities of the club secretary or Activities manager. Your next assigned activity will be the TWA Annual Christmas party. All you need do is find out how many are going to attend and notify the restaurant a week in advance in order to have enough table settings on December 13. Sounds easy, doesn't it ? Not really, I recall one year we had 25 register in advance and 28 were in attendance which made it difficult for the cooks to prepare and we only had 25 programs printed.

Now let's try for Field Day in June 2004. The club always prepares a cooked meal for early evening. We also serve a hearty breakfast Sunday morning. Our club has now grown to well over 30 members. How many will attend ? How much do you cook for the Saturday evening meal ? How many potatoes do you peal for breakfast ? How many dozen eggs must you get ? Have you got the answer ?

I guess not, and neither does any of your club officers. This past Field Day 2003 in order not to go overboard a sign up sheet was displayed for those planning to be there for Sunday breakfast. Twelve (12) signed the sheet and chef Ron, KB3CFV prepared a terrific breakfast for *12* and fifteen (15) showed up. Two dozen eggs or 24 slices of bacon divided by fifteen does not come out even. Six members were short changed and only got one egg which I don't think is fair.

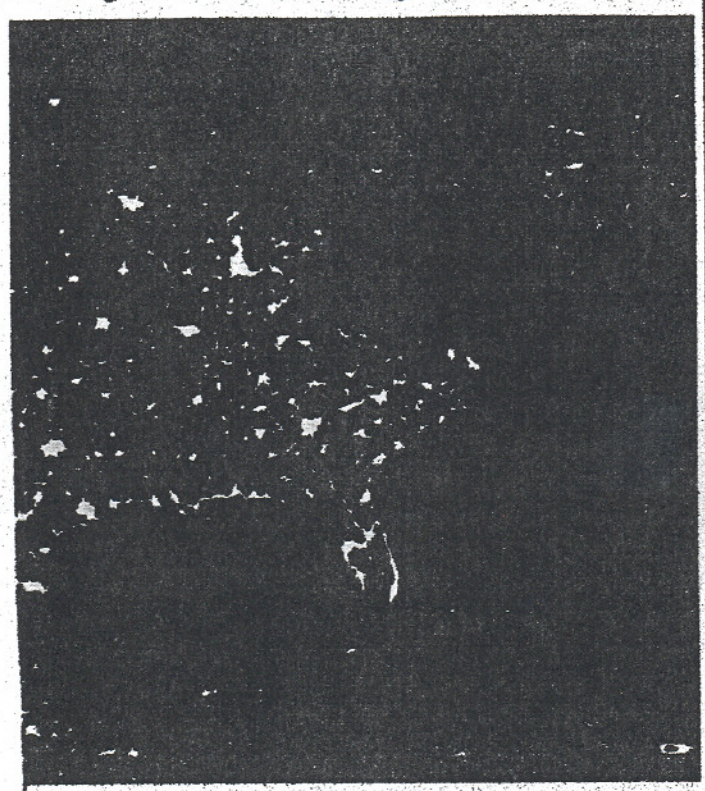
Preparing food in advance is no fun if you don't know numbers, how many will attend. We had another problem with the Annual Family picnic. Not knowing the attendance in advance, how do you make your covered dish. Will it be large enough to feed every one or insufficient to feed the canaries. One person brought enough Parogies to feed three boy scout troops (But they were Good). Thanks to all who brought other dishes and condiments.

Looking toward future activities we must play fair with our various committees where food preparation is involved. Any club activity that requires advance preparation of food will require members to complete a registration form to assist the committee on how many to prepare for.

Where Were You When The Lights Went Out

Yes, it happened again, similar to the power black-out back during the mid 1960's. That time it affected our area but some how the P P & L system was dropped from the eastern power grid and only a portion of the East coast, a portion of eastern Canada and as far west as Ohio and Michigan was dropped.

Where were we ? After hearing about the dilemma on TV we grabbed our Koni-Omega camera, donned our space suit, preset the cruise control on our trusty space traveler and headed straight up for about fifteen miles.



East Coast Power Black Out August 14, 2003

The view from up there was terrific and the photo shown here is what we caught on film. The sparsely populated area—Schuylkill and Carbon counties— did not show to well but if you look close you can pick out the border line where the black out was not affected.

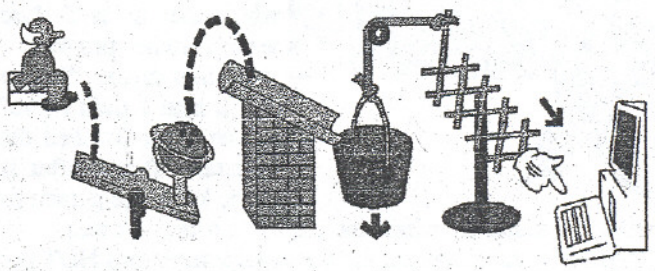
Actually, W3ZRQ swiped this photo from the internet and is an actual photo taken by one of the satellites. The original photo covered all of Canada, United States and Mexico. Ye editor cropped the picture to fit in the Splatter column. It only proves one thing, we print anything in the bulletin.

As to the cause of the power drop out no one in the electric companies nor the United States government wants to step forward with the answer. The black-out during the 60's was due to a stupid control operator. 1,243 nuts and bolts to build an automobile, yet it only takes one loose nut behind the wheel to make it fall apart.

Yes' It Did Happen

It happened before and could very well happen again. Electric power failure is nothing new, this is fact we have to become accustomed. As one news reporter put it, "The Greedy money hungry power companies have not kept in step with time and their distribution system is still pre- world war II era ".

It doesn't really have to be a flood, hurricane, or freezing rain and sleet storm to disrupt the A C power to your home. All it takes is for some idiot at a large power distribution center to push the wrong button and start a chain reaction cutting power to thousands of homes and industries.



We lucked out in the August 14 Black out because someone at the P P & L master distribution center saw it coming and disconnected our area from the grid just in time.

Back to reality, what would be the first thing you would have done had it affected our area ? The answer to that question was covered quite well for those who attended our last TWA class on Emergency operating procedures. Since then — our club has increased in rank, is it time for another refresher course ?

There is insufficient time and space in this column to go over each item covered and discussed during those class sessions. We always begin with a large group and by the third or fourth session dwindles to about 65 percent. Perhaps we need different instructors to keep up the interest. Instruction manuals and printed hand-outs are free. There is no final examination. All that is required is your interest in learning more about what Amateur Radio is capable of doing, in addition to why the FCC allows us to exist.

One of the on-going TWA projects is the renovating of our trailer into a portable emergency radio operating center. This is a club project and should not be left to 3 or 4 to do all the work. To date, work parties have spent much of their free time on week-ends. For example; Install a new reinforcement floor, Replace wall panels, electrical work, construct a radio operating counsel, painting and other small jobs. The work is all voluntary , ***It's YOUR CLUB.*** Can you spare a few hours, or some of your ideas

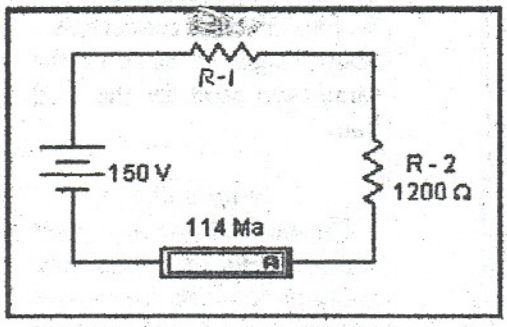
Hopefully we'll never have to use it for emergency operations but will come in handy for Field Day On the other hand, in the event we do have to press it into service, how many will be sufficiently knowledgeable to operate from an emergency communications center.

Electronic Basics and Fundamentals

Chapter 3. By A. R. Breiner W3TI

In our last chapter we ended with George Ohm establishing a standard of what an "Ohm" of resistance consists of and D'Arsonval had invented the ammeter. However, to make all this resistance , volts, and amperes work for us George Ohms also established the comparison of an electrical circuit to a system of mathematical calculations. This was something no one ever tried before , but surprisingly, his system works. What we do with electronic components in a circuit, we can now prove it through a system of mathematical association.

There are still some questions that I can find no answers. How did Alesander Volta determine whether his battery had one , two, or three volts, because at that time the ammeter had not yet been invented. Charles Coulomb established, one Ampere is when 6.28 Billion-billion electrons pass a given point in one second. He called it a Coulomb. What did he measure it with ?

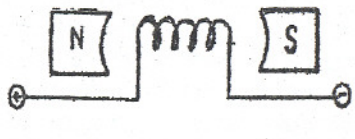


Using Ohms Law formulas, lets take the circuit to our left and calculate for the value of resistor R-1. Our first action is to calculate the total resistance of the circuit. By dividing the voltage, 150 by the total current 114 Ma. We get a total resistance of 1315 ohms. Subtracting 1200 from the total leaves 115 ohms for the value of R-1. That wasn't that hard was it. Lets move on to further use of that new invention, the ammeter.

In the following paragraphs we shall be using terminology such as; *Internal Resistance,* this is the resistance of the coil inside the meter; *Shunt resistance,* the value of resistance it takes to increase the ampere reading on the meter; *Full Scale reading,* the maximum number of amperes a meter can handle; *Meter Sensitivity,* is given in Ohms per volt, and *Meter Movement* , tells what the basic meter movement is without any shunts applied.

Every analogue type meter used today is an ammeter as shown in its basic form, Figure M-1. A permanent magnet north and south pole, and the internal meter coil suspended on two pivots between the magnet. *Not shown is the pointer needle.*

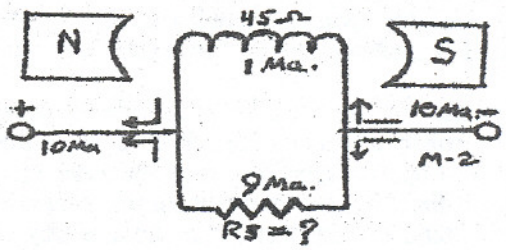
For example, the Meter Movement shown here is a zero to 1 Milliampere meter. That means it can pass any amount of current up to one thousandth (0.001) of an ampere. The coil in the meter will not handle more current and will burn up from any additional overrun of amperes. The current (*amperes*) is pushed through the coil of wire by an Electro Motive Force (*EMF*) or voltage. This produces a magnetic field around the coil which opposes the permanent magnetic field. This tends to push the coil and turns it on its pivots, therefore moving the pointer needle. The more current pushed through the coil forces the coil further away. The maximum it can turn is 90 degrees which would be the top or end of the meter scale.



M-1

However, all is not lost, refer to figure M-2 and see how to increase the current reading using the same meter. That is if you didn't burn it up.

The sketch shows the meter with a resistance parallel with that of the internal coil, it's called the *shunt resistance.* Our objective is to measure a maximum of 10 Ma. Therefore; the current through the *shunt* is equal to the total current minus the current through the meter. Or, one Ma. Thru the meter and 9 Ma. Thru the shunt.



M-2

As indicated, the internal resistance or coil resistance is 45 ohms. Using ohms law E = I x R, 0.001 x 45 equals the voltage drop across the meter, or 0.045 volts. The shunt resistance will have the same voltage drop. Again use ohms law , the shunt voltage (0.045 V) divided by the shunt current (9 Ma.) will equal the shunt resistance of 5 ohms..

Placing this meter in a circuit that would show half scale on the meter will indicate 5 Ma. That will be 4.5 Ma. through the shunt and 1/2 Ma. through the meter.

We can use the same meter to increase the current reading to 25 or 50 Ma. The shunt resistance for 25 Ma. would be 1.875 ohms and 50 Ma. would be 0.9 ohms.

The internal resistance varies from one meter to another. You must know the internal resistance in order to calculate the shunt resistance. Never use an Ohmmeter to measure the meter resistance because you will ruin said meter. That is another "trick of the trade" which will be explained in another chapter.

In the next chapter we'll use the same zero to 1 Ma. Meter to measure the Electro Motive Force, otherwise known as the *voltage.*. Or are you getting tired of this series of technical information.

The Technical Korner

By W3TI

As amateur radio operators each of us strive to have the best equipment we can afford and wish to maintain it to the best of our ability. Also try to erect the best R F radiator (*antenna*) to have noise and interference free communications. Our last issue of Splatter contained one of a series of articles on grounding systems. As mentioned, grounding systems for lightning should be designed according to the location, longitude and latitude and the type of earth surrounding your radio station. You might have the most perfect antenna system but a terrible ground system and wonder why you can't contact the DX like the fellow up the street.

All winter long we have been waiting for Spring to arrive, it too will pass before you know and we'll be experiencing the heat of summer and all that goes with it, rain, thunder and lightning. We all dread that flash followed by a clap of thunder, especially when it happens to be very close to our antenna farm.

The following article was dug up from the Splatter Morgue Spring issue of 1989 and has very little to do with a grounding system but is a follow-up on grounding the feed lines against those mini static flashes that occur when a storm approaches from a distance.

I first saw this article in a Motorola Technical manual and it wonders me why this idea never appeared in any amateur radio periodicals. Probably because it requires some calculations and is a bit versed in algebra including "coax know how" in order to assemble.

At first glance you say it's a direct short in the coaxial line, however, it actually acts as an R.F. choke or shunt that shorts any excess RF (input) to ground before it enters the receiver. It will not stop a direct strike from damaging your equipment but it will prevent static buildup that comes from nearby lightning strikes.

CONSTRUCTION

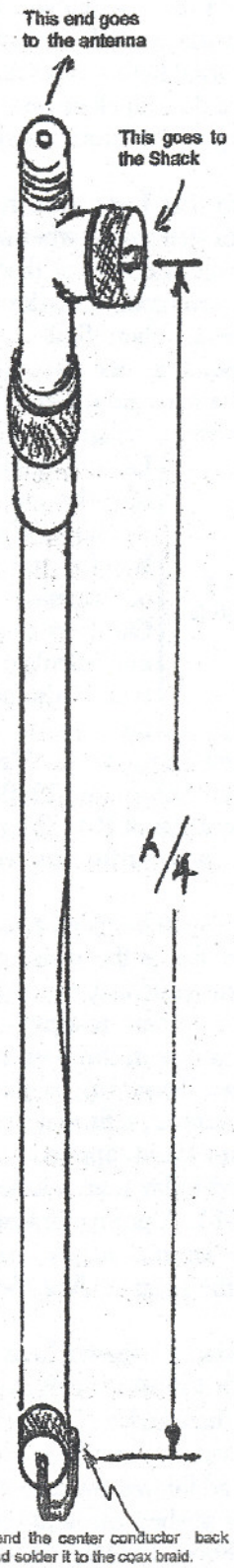
First item required is the 2 meter frequency you generally are most active. If your two meter activity is between 146 and 148 Mhz. Calculate the stub for 147 Mhz. If your activity is in the lower portion, 145 to 146 Mhz calculate the stub for 145.5 Mhz. Etc.

Designators for the formula

K Factor = 5905
VF = Velocity factor of coax (See Chart)
F = Center frequency of the band used
$\lambda/4$ = 1/4 wave length stub

$$\lambda/4 = \frac{(5905)(VF)}{\frac{F}{2}}$$

Type	Dielectric	VF
RG-8	Poly	.66
RG-58	Poly	.66
RG-8	Foam	.78
RG-59	" "	.78
RG-11	" "	.68
9913	Air space Poly	.89



The following calculations are for a quarter wave stub if you used RG-8 Foam dielectric. Please note, measurements for the length of the stub is taken from the center of the coax tee to the end of the short piece of coax.

144.5 Mhz. 15.9 inches
145.0 Mhz 15.8 inches
146.0 Mhz. 15.7 inches
147.0 Mhz 15.6 inches

Parts Required

1- Coax Tee connector
3- PL-259 coax connectors
Short length of coax of the same type used for the feed line.

Installation

Cut the feed line at a point close to where it enters your building or shack. Leave sufficient coax for the a rain drop drip loop. Attach a PL-259 connector to each end of cut coax.

To get the stub length as exact as possible cut the coax a few inches longer then necessary and attach the PL-259. Screw that portion of the stub on to the coax Tee and measure from the center of the Tee for the correct length.

Leave extra length of the center conductor extend and solder it back unto the braid as shown. Seal the end with silicone, do not use electrical tape. It may look like a complete short, but actually it's a quarter wave R F Choke

For further details contact W3TI

Tamaqua Halloween Parade
Tuesday October 28

Last year the Tamaqua Halloween parade had been cancelled due to rain, sleet and snow all at the same time. It was a miserable night. This year we have been asked to participate and assist the Tamaqua Lions club and Tamaqua Chamber of commerce in setting up the 33rd. Annual Tamaqua Halloween parade.



Having participatcd in this event for over thirty years has taught us a number of things, one is DON'T ANTICIPATE ANYTHING. We always seem to learn something new and have been able to patch it up so the parade runs as smoothly as possible.

This year the parade control station has moved to a different location in the new chamber of commerce building and will have access to telephone for any local emergency service if required. Members should meet behind the Municipal building around 5:30 to get the parade roster and additional changes.

After the parade we are invited to the Elks Club for a hot cup of soup and sandwich. Also discuss any glitch or problems encountered during the march up town.

The TWA Oath

We the Willing
Led By the Unknowing
Are Doing the Impossible.
In the Interest of Public Service.
We Have Done So Much
For So Long
With So Little
We Are Now Qualified
To Do Anything
With Nothing

From time to time I overhear them talking about putting in a new 3/4 " plywood sub floor and covering it with lino leum. They are going to install regulation electrical receptacles and construct a radio operating console in the former shower and powder room area. The main electric power distribution panel is going to be replaced and accessible for a gasoline powered generator in the event of AC line black-out.

During the ladder part of August I was moved to my present location under the trees and leveled up on cinder blocks. They gave my exterior a new coat of paint and the yellow/orange stripe around me is now a light color blue.

From what I gather, the new owners plan to visit me quite often and make use of the new amateur radio operating facilities. It makes me feel good that I can rest in one place and be of some use again and don't have to be towed around the countryside from the back of a truck.

You'll probably be getting progress reports about me in future club bulletins and as members of this club I would be pleased if you would stop by and visit me from time to time. Cyinara.

TWA Officers

President Al W3ZRQ
Vice Pres. Darryl N2DIY
Sect-Treas. Al W3TI
Trustee Chip NI3H
Activities Mgr. Ed KB3DYJ
COMMITTEES
EC & VEC Bill WY3K
RFI Bud KB3FSU
Antenna Crew Steve KB3FJJ
Awards Darryl N2DIY
Bulletin Al W3TI
TWA Web site Shane KB3JFK

Did YOU get your name on the Christmas Party List ?

TWA Calendar of Events
Oct. 11-12, Penna. QSO Party. Details Inside
Oct. 17 Regular TWA Meeting, East End Fire Co. 7:30 p.m.
Oct. 25 Annual Grave Dig, Spook and Scavenger Hunt
Oct. 28 Tamaqua Halloween Parade. 5:30 p.m.
Nov. 1, TWA VE Exams, Tamaqua Borough Bldg. 9 a.m.
TWA Annual Christmas Party Saturday December 13.

Tamaqua Wireless Assn.
212 Race Street
Tamaqua, Pa. 18252

TIME LIMITED MAIL
MEETING NOTICE

Cut Here---------- Return this part to the club secretary ----------Cut Here

TWA December 13, 2003 Annual Christmas Party

Registration Form, Please Check one line please

☐ Please place my call on the preregistration list. I will be attending alone.

☐ I will be there with _____ additional guests.
Number

Signed _____ Call _____

All Registrations MUST be received before 12 Noon, Sunday December 7, 2003