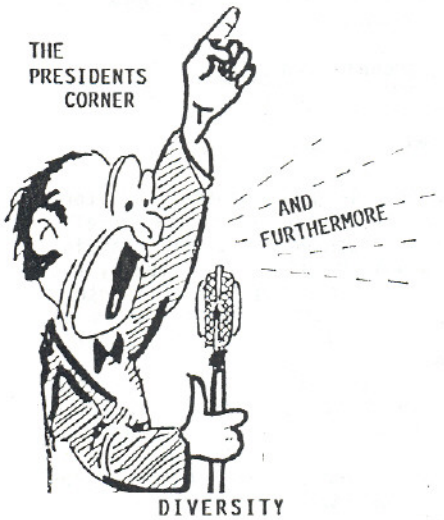
SPLATTER

THIS BULLETIN IS PRINTED FROM TIME TO TIME AND DISTRIBUTED TO THE MEMBERS OF THE
TAMAQUA WIRELESS ASSOCIATION
TAMAQUA, PA. 18252

May June July | FIELD DAY & FIRE CRACKER ISSUE | 1995



DIVERSITY

By WY3K

This is a term that we hear a lot about these days. Whether it is in the work place, on the news, or at play, Diversity is getting considerable mileage. When you sit back and think about it, Diversity is what makes being an Amateur Operator interesting. Have you ever stopped to think how many different modes of operation exist in Amateur Radio ? Not to mention the various types of activities that are centered around Amateur Radio.

Recently I had the opportunity to visit a friend who's primary interest in Amateur Radio is collecting and operating antique radios. Most of us call them boat anchors, but what an impressive sight. It was like walking back in time, and the audio quality of those old rigs were equally impressive. My only question to him was "How much reinforcement was added to the floor to support the extra weight."

On the other end of the spectrum is the latest in technology, Satellite and digital communications. I remember several years ago WB3JYY and I set up a satellite station. It was a modest one with home brew antennas, but we were successful in making one CW contact. As for packet, it was only a little over a year ago I thought 1200 baud was all that I would ever require. Then too, I recall a computer buff telling me in the early eighties that when you had 64K of RAM you would have more computing power that you would ever need.

Cont'd. page 3.

T W A FIELD DAY 1995

By W3TI



FROM WHERE WE SIT

Have you ever wondered why is there an Amateur Radio Annual Field Day and why is it sponsored by the American Radio Relay League from Newington Connecticut ? That should be a sufficient interrogative to begin this article. There wasn't always an Amateur Radio Field Day exercise because it only had its beginning in the late 1930's.

It was during the summer of 1936 that Central United States and the New England, including Pennsylvania had areas of heavy rains which resulted in excessive flooding. This was cause and affect to have electric power and telephone service in the afflicted areas to become practically nil. A few licensed Amateur operators at that time joined forces with the Army Signal Corp and formed a network of emergency radio communications all on C.W. In later years this became format and beginning of the organization now known as MARS or the Military Amateur Affiliate Radio Service.

The American Radio Relay League took note of the excellent service given by those Amateur volunteers. Taking this into consideration the League decided this service should be expanded and put to use during future emergencies. Hence, the League sponsored the first Field Day exercise in 1936, exact month unknown. Club groups were encouraged to go to the fields with tents, portable radios, transmitters, and power generators and operate under simulated emergency conditions and make two way contact with other Field Day stations as well as home operated stations. The same format as we use today.

When WW II came along Field Day had to be cancelled. It was started again June 1946. It was at that time scores and contacts made by each unit were published in QST. There were no block busting, ear blasting signals because the transmitters were all home made and in the 30 to 50 watt C.W. class. Antennas were usually an end fed long wire. No 40 foot towers with umteen element beams for 20 or 10 meters (we didn't have 15 yet). If your group was fortunate to have A.M. phone it usually was a 25 to 50 watt Heising modulated transmitter. 40 meters was all C.W. and the point getter just like today. For power, the Tamaqua club group was fortunate to get the loan of an 8 KW Army surplus A.C. generator.

During these early years Field Day "WAS" known as a testing exercise for emergency communications equipment. (PLEASE NOTE, I emphasized "WAS"). In 1965 ye editor got a terrible ream job by the National Emergency Coordinator from ARRL because we changed the name to "The Field Day Contest" in our club bulletin. Then in 1972 the June issue of QST listed the "1972 Field Day **CONTEST**" Rules, and is known as such today.

The Tamaqua Amateur Radio group has been emergency minded ever since the Great Tamaqua Flood of 1955 and has set up each Field Day station to simulate operating during emergency conditions.

Equipment used over the past 49 years have changed. Different frequencies and modes have been added. The antennas used are varied and used by the T.W.A. as a time for antenna experimentation. Field Day is also utilized to give Novice, Teck, and General class additional code experience to help increase their C. W. copying ability. The number of Extra class operators in the club bear witness to this.

Field Day 1995 will be held at the same location as last year, Owl Creek Reservoir, on Saturday and Sunday June 24 & 25th. RAIN OR SHINE because emergencies don't always happen on sunny week ends. The greater portion of the June 16 T.W.A. meeting will be Field Day planing. Any Amateur that has never experienced a Field Day should plan to attend a few hours and would be welcome to spent the whole 24 hour period. The 'Regulars' will be there as usual to assist in setting up and answer any of your varied questions.

FINAL NOTICE

Due to a glitch at the Tuscarora post office some of you might have received the Ground Hog issue to late to take advantage of the VE testing on March 4th. Future exam dates are listed elsewhere in this issue.

Also enclosed in that issue was your invitation to join the Tamaqua Wireless Association. Those of you that have already applied for membership need read no farther.

For those who procrastinate and playing the waiting game, we present the following. At the time of this writing (April) the T W A has 16 members. If your daily routine or working schedule prevents you from attending our meetings, you will find an application enclosed for your convenience. Fill it out and mail to the secretary. In case you forgot, our meeting nites are the third Friday, 8 p.m. at the American Hose Fire company.

S. S. B.

Swap - Sell - or Barter

For SALE: 50 foot crank-up tower in good condx. Double 2 meter phased Yagi. Call Lou Fagan K3KGO, 385 2872

SELL: Phelps Dodge two meter Duplexer, Excellent condx. with manuals for tuning to your own repeater frequency. See K3NYX, Call 668-5198 after 7 p.m.

SELL: A limited quantity of the final production run of the TI-KEY Keyer Paddle.
A Creative Products, SAC-10 Smart Repeater controller circuit board never used. Comes with schematics and manuals. See W3TI, call 668-3098 after 7 p.m.

GUY WIRES & TOWERS

By W3TI

Art and Harry both have towers in their adjoining back yard properties. Each make use of their respective tower bases to attach one of the three guy wires. We are interested only in the one's attached to the tower bases as shown in figure 1.

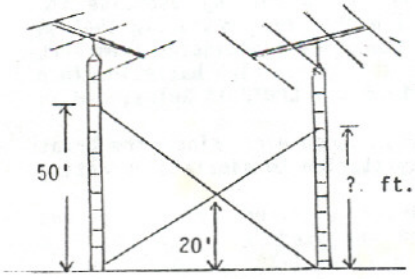


Figure 1.

The guy wire from Art's tower is attached at the 50 foot level. Both Art's and Harry's guy wires cross each other at the 20 foot level. At what height above ground is Harry's guy wire attached to his tower ?

The World steps aside for the man who knows what he's looking for.

HOW GOOD IS YOUR GROUND - Part 2

By W3TI

After writing the recent article on "How Good is your Ground" I realized that the article described is basically a test for good grounds for stations that are located in the basement or on the first, or ground floor. But what about the Shack located in a second floor bed room or third floor attic. Yes, some stations don't have the convenience of being at ground level.

At Novice Class instruction and Club meetings the point was always stressed about having a good grounding system in order to avoid that pesty neighborhood RFI.

A recent article in the "FISTS" C W bulletin detailed a fellow Ham who had a second floor Shack and developed a very bad case of RFI. He did have the shack grounded via a ground wire from the bedroom window down to a 3 foot ground rod 25 feet below. Yet, still had the problem.

You may laugh at the solution but after this writer had some serious thoughts on the subject, it was noticed that the idea and solution was so simple and wonders why he never thought of it.

SOLUTION Shield the ground wire ! Sounds silly doesn't it. How does one shield a ground wire that is already at ground potential ?

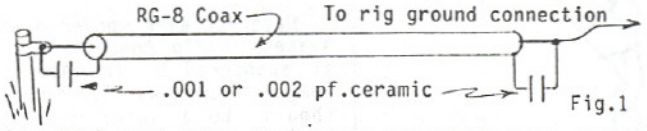


Fig.1

Start by using RG-8 coax cable that has a number 12 gauge center conductor. This will be the Shack ground wire surrounded by the braid or copper shield. Actually, in theory you are not shielding the shack ground wire, but changing the reactance in that shack ground wire. The shack ground wire as seen by the transmitter is acting as an extension of your antenna radiating system. In other words, the ground wire is extra long so the transmitter adapts it as an extension of the antenna used and therefore radiates just as an antenna should. The net result, R.F. at ground level all over the neighborhood.

Shielding the ground wire and by-passing it at both ends with ceramic capacitors changes the reactance in the center conductor therefore by-passing the unwanted RF to ground via the shield. See figure 1. Hence, the wire is no longer a radiator of RF.

A three foot ground rod is fair but not considered good. Take a trip to your friendly neighborhood Electrical Supply store and purchase a 6 or 8 foot regulation rod. You will notice a difference in the performance of the tranceiver immediately.

In the next issue of "Splatter" we'll have Part 3 on the series of Grounds and Grounding. As previously stated, a good ground system is just as important at a good antenna.

Something to Think About

Some time ago there were four people named EVERYBODY, SOMEBODY, NOBODY, and ANYBODY. When there was a project or important job to be done, EVERYBODY was sure that SOMEBODY would do it. ANYBODY could have done it, but NOBODY did it.

When NOBODY did it, EVERYBODY got angry because it was everybody's job. EVERYBODY thought that SOMEBODY would do it, but NOBODY realized that nobody would do it.

So it ended up that EVERYBODY blamed SOMEBODY when NOBODY did what ANYBODY could have done in the first place.

Officers of the TAMAQUA WIRELESS ASSOCIATION

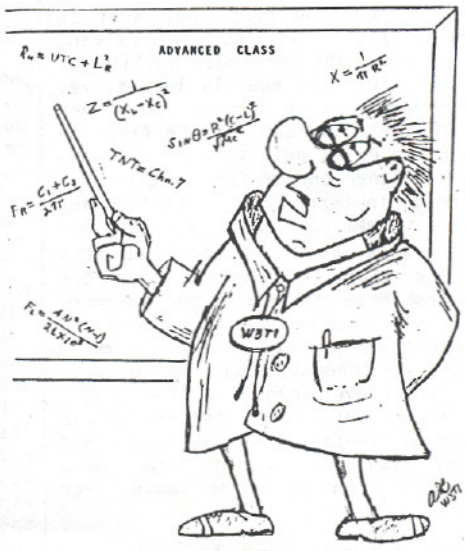
WY3K President
KA3WGG Vice Pres.
W3TI Secy.-Treas.
K3NYX Activities Mgr.

THE CLUB BULLETIN is mailed to members only. If your call letters on the mailing label of this issue are RED circled, this could be the last bulletin you receive. Enclosed is an application for you. 73

VOLUNTEER EXAM DATES

The Tamaqua Wireless Exam team will give Novice, Technician, General, Advanced and Extra exams at the Tamaqua Municipal Building, 9 a.m. on the following dates.

June 3 - August 5 - November 4



This is a GUESS WHO cartoon.

PROGRAMS ANYONE

Every club member I've ever talked with and questioned about having some sort of program or presentation after our regular business sessions have agreed 100% "Very good, Excellent idea", and that's as far as it gets. No one seems to want to exert the effort to work up a 15 or 20 minute program. Excuses, more excuses than the number on your Social Security card.

It's not right for the same few members to always stand in front of the group and give a talk. First off, must it always be about Amateur Radio.

Recall the excellent presentation on the Art of Bee keeping by AA3CU which was interesting and very informative. We don't want to hear about "Home Brewing equipment" all the time either. In our small congregation there is one thing going for us. Each and every one of us has some trick or bit of expertise tucked away regarding past experiences. Why not share them with the your fellow Amateurs ?

Now we get to another set of excuses, "I'm not experienced enough to talk in front of a group" or "They'll laugh at me". Lest we forget, people only laugh at a clown, but will pity a fool. I recall a comment made by one of my college professors who said that in order to tell a good story about someone else's experience, you must first be able to tell a story about yourself. Then above all, laugh at it with your audience.

A group such as we have are not looking for professional speakers, They cost money and about the best we could offer at this time would be some refreshments to lubricate the vocal cords.

At a recent meeting a list of prospective program topics were read off which which have been voluntarily offered by 2 or 3 members. You might be interested in some of them and care less about others. For a change of pace let us hear what you have to offer. Any presentation need only be 15 to 20 minutes in length leaving some time for questions and those interested will have questions. Think it over, Programs Anyone ?

Diversity continued

Truly, Amateur Radio is a hobby with Diversity. If you are really interested and have a love for Electronics and Communications you will never run out of things to do. Some of my interests center around Public Service, but I'll save the details on that subject for a future article. For those that attended the April club meeting we saw how several of our members apply Amateur Radio toward their hobby by flying radio controlled model airplanes.

In closing, I would like to say that Diversity is one of the cornerstones of the Tamaqua Wireless Association. The informative programs listed for future club meetings shall cover a great many different aspects of Amateur Radio and by next year at this time I would expect the membership will have increased their knowledge and greater appreciation toward the many facets of this Diverse Hobby.

DX - 2059

By W3ZRQ

The other day while tuning from 75,000 Mili-stimps down to the low end of the 50 septrun units I ran across the oddest QSO in progress. There was a DX-Pedition in progress some where in the area of Espor Van Schmear case sublena or close to there. This as you know is 256,938.24 minums straight up and a slight hee-haw to the left of our Milky Way.

This DX-Pedition came across a time capsule that had gone astray some where during the 20th century. Whilst this QSO was in progress I tuned up on their specific Micstumps and became involved with some of the odd speech being emitted from the Time Capsule playback. The mannerisms were not too hard to understand but we could not decipher those continuous slammings of broadcasts from that particular era.

There was a continuous "Breaker breaker breaker", "Roger roger", "Keelo-watt number three", and advertising "Whisky three" shouted back and fourth to one and other. This we all know is a far cry from the type QSO and conversation that ensues in a Tele Trans-nutroseara Portation of this day and age.

Additional listening revealed their Transmitters, as they were called, had to be tuned manually. After the DX station contact was over the QSL card had to be sent via a Governmental department known as the Postal service. Some cards took as long as 300 to 800 days to encircle the globe to get to their destination. Some arrived long after the operator had moved OTH or was deceased.

Amateur Radio equipment during that era seemed quite antique as compared to our stations today. We are able to make WAEC (Worked all Equestial Constell-ations) in a minimum of 600 hours. Our standard receiver is the NUP or Neurtor-Universal-Perceptor which can be tuned manually or by a motor driven scanner which operates until we hear something interesting.

After tuning in a station you wish to contact you merely push the three purple, lavender, and ivory buttons which turns off the scanner and peaks the NUP to very fine reception or less than 20 one-thousandths of a kilo-hertz bandwidth. This also fires up the Tele-Infractionator-Pluminositor. The third or ivory button has a built in time delay. While the QSO is in progress and the operator at the other end acknowledges receipt of our call, which incidently is Astro-U-Hector Sub/2, the time delay is now run out and the ivory button takes over.

A 104 mm.X 185 mm.Muro-delirum metal plate (similar to Stainless steel) is automatically placed under the receivers Flumo-Tumo-graver. The QSO only lasts a few seconds, the Flumo-Tumo-Graver transfers the whole conversation, a copy of his photo and his style and design QSL plate.

Since time and space is limited I shall not go into detail on the operation of the Tele-Infraction-Pluminator which sends him your QSL. This gives you some idea of the obstacles Hams have to overcome these days. Especially when a meteor storm burst is in progress. Things fly in all directions if the Flumo-Graver is not terminated immediately.

One big interference problem is when you receive some one else's QSL by mistake. That only happens when you tune in on some other QSO and have all three buttons depressed. Then its your problem to get it delivered.

That's all for this round but if you're interested in more Neuro-Tele-Quadridynamics I'll continue in a future issue.

Editors Note * This DX article was originally written around 1963 and printed in the Mt. Airy VHF Society, Pack Rats Radio Club bulletin in Philadelphia. The writer, W3ZRQ, is now W3TI. That was 32 years ago but notice the similarity of the equipment function is almost like our high speed packet communications we have today. Prognostication ? Incident or accident ? What do you think ?

Telegraphic History

Since the American Morse code's space letters (C, O, R, Y and Z) and long "L" cause problems when used with submarine cables, the "International" or "Continental" Morse code is developed at the International Telegraphic Conference in Berlin. It combines portions of the Davy code (1838) and the Bain code (1846). (It is interesting to note that Davy was a dentist, and Bain was a clockmaker.)

--1852--

The first "Channel Cable" is laid between London and Paris.

--1854--

Cyrus W. Field consults with Morse on an "Atlantic Cable".

--1856--

(Apr 4)—NY & MV PTC officially changes the name of its union of 13 different telegraph companies to "Western Union".

The sounder is invented.

--1857--

Morse (66 years old) accepts a one-time payment of 400k gold francs for the right for Europeans to legally use his telegraphic techniques.

The "National Telegraphic Review and Operator's Guide" lists "73" which means "My love to you." (See 1859 for a later definition.)

CALENDAR OF EVENTS

By Activities Mgr. K3NYX

A judiciary meeting is held every 3rd. Wednesday of the month. Committee and Teck sessions are held every 1st. 2nd. 4th. and 5th Wednesday evenings.

May 19. Club Meeting
American Hose Fire Co.
May 20. Dead line for Splatter bulletin material.
May 29. Tuscarora Model Flying club meet. Radio impound by TWA.
Tuscarora State Park.
June 3. FCC License Exams by VE team.
Tamaqua Municipal Building.
~~June~~ July 16. Club meeting.
American Hose Fire Co.
June 24-25. Annual Field Day exercise. Owl Creek Reservoir.
~~June~~ July 21. Club meeting.
American Hose Fire Co.
August 5. FCC Exams by the VE Team.
Tamaqua Municipal Building.
August 11. Tamaqua Annual Soap Box Jalopy Races. South Ward Playground.
August 18. Club meeting.
American Hose Fire Co.
August 19. Dead Line for Splatter bulletin articles.
August 20. Annual Club picnic.
September 15. Club meeting American Hose Fire Co. and Great Tomato Race.
October 20. Club meeting American Hose Fire Co. Nomination of officers for 1996.
October 31. Tamaqua Annual Halloween parade.
November 4. FCC Exams by the VE team at The Tamaqua Municipal Building.
November 17. Club meeting. American Hose Fire Co. Election of officers for 1996.
December 15. Club meeting American Hose Fire Co. Installation of officers for 1996.

The TWA, as always, has additional activities that pop up between bulletin announcements. Attend the meetings regularly to keep your activity calendar up to date.

AFTER FIELD DAY SYNDROME

Dear OM:

This chain letter was started by a Ham like yourself in hope that it might bring relief and happiness to tired C W operators after the Field Day week end. Unlike most chain letters this one does not cost you anything. Simply place your call letters at the bottom of the list below, then send a copy of this letter to five of your fellow Hams who are equally tired....

Then bundle up your XYL and ship her to the Ham whose call appears at the top of the list. By the time your call appears at the top of the list you will be receiving 16,478 XYL's. Some of them will be dandies. Have faith, do not break the chain. One OM failed, broke the chain and got his own XYL shipped back to him.

Sincere 73,

W8WGX, K3NYX, WB2YVW, W3TI, W5NGN.

PS. Several weeks ago one OM received 368 XYL's. They buried him yesterday. It took three undertakers 2 days to get the smile off his face...

The Kar Korner

By Jeff KB3ACB

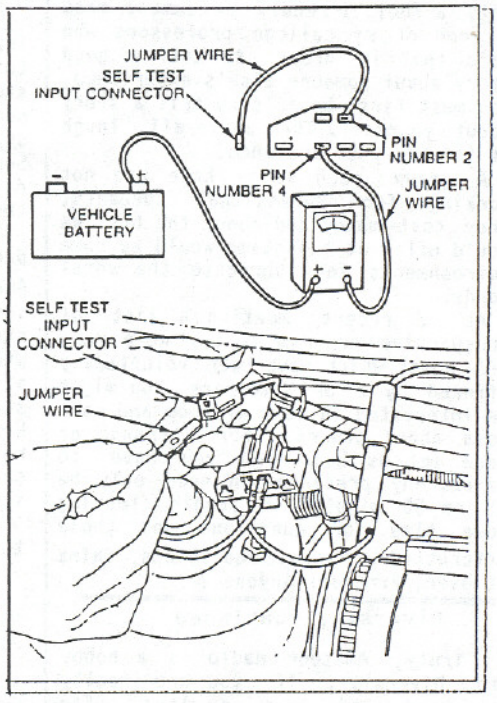
It has come to my attention that some of us Amateurs may enjoy working on the family auto but many of you are afraid of its computer. This being a first of a series of such articles, I shall try to set your mind at ease and show some basic and some not so basic tests you can make. A computer will set "fault" codes when it thinks there is a problem. Note: There will not always be a problem because there is a code set.

In our first article we'll concentrate on the retrieval of these fault codes from your Ford Electronic Control Assembly or ECA for short. Please note you can run more tests on this system than any other. As a result this makes diagnosis easier. The computer system is made of sensors and actuators. It receives signals from sensors that tell it that a change has occurred (this not always bad). Then it determines what to do to compensate for this change. Finally, it sends a signal to the appropriate actuator to change either the ignition timing or fuel delivery. This is an ongoing process and basically the same for all makes of cars.

TESTING

The only tools required is a short jumper wire (a paper clip will do) and an analog volt/ohm meter. CAUTION: Be sure your meter does not draw more than 500 ma. or you could damage the system. The vehicle should be warmed up for 2 minutes at approximately 2000 RPM then shut off. This part holds true for most other cars.

Now locate the test connectors in the engine compartment, usually located near either fender well. Set the VOM to read 5 volts max and connect the positive (red) lead directly to the battery positive terminal. Connect the negative (Black) lead to pin number 4 of the test connector, (Refer to pictorial). Connect the short jumper wire to pin number 2. Leave the other end disconnected at this time. Turn off all electrical equipment on the car and turn the ignition key on but DO NOT start the car. Now connect the other end of the jumper wire to the pig-tail connector as shown.



Now you should receive codes via the VOM. The meter pointer will begin to sweep across the scale a number of times, then pause for 2 seconds and sweep again. Count the number of times it sweeps each time, put the two numbers together and you have a 2-digit fault code, e.g. First, pointer sweeps 3 times, pauses 2 seconds and then sweeps 8 times. It has given you code 38. The computer will give each code twice.

The first types of codes received are called "On demand Codes". These are the problems it sees right now. After these codes are complete you receive a code ten, one sweep and a long pause. This means the "On demand codes" have ended. Get ready to receive "Continuous Memory codes". THese are the codes that the computer has stored up in memory. When these codes ore complete, disconnect the pig-tail connector and turn ignition key off. This in known as the "Key on, engine off test" or KOEO.

Now we'll run a "Key on Engine running test" or KOER. Be certain the pig-tail connector is disconnected, start the engine. NOW connect the pig-tail again. After a few seconds you should receive codes 20, 30, or 40. This indicates the number of cylinders in your car. 20 indicates 4 cylinders, 30 is six and 40 is eight cylinders. Now turn the steering wheel one half turn, press and release the brake pedal. You will receive a code 10 that requires a brief wide open throttle. Now you will begin to receive more On demand codes.

If you receive a code 11, system pass, code on all of these tests and you feel that a problem still exists, the last test you can perform is called a Cylinder Balance Test on cars with Sequential Fuel Injection or SFI. This test will turn each injector off individually and look for an RPM drop. If there is no drop then something isn't working in that cylinder (injector bad, no spark, or bad compression).

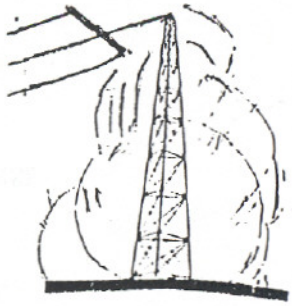
I did not include a copy of a Ford code chart because of limited space, but if you need one contact me at any TWA club meeting. I have computer code tests for other cars. If there is interest shown we'll print test procedures in future issues of "Splatter".

MEMBERSHIP CARDS It was decided at the March meeting to have a membership card design contest. Card design entry dead-line is May 19. No special drawing skill required, any number of designs may be entered. Draw or type your design(s) on a 5 x 7 inch format. The winning entry will be shrunk to wallet size and laminated in plastic.



TAMAQUA WIRELESS ASSOCIATION

212 Race Street, Tamaqua, Pa. 18252



May 5, 1995

Too the members of the Tamaqua Wireless Association.

Greetings:

In accordance with the Constitution of the Tamaqua Wireless Association, Article VI - AMENDMENTS, Item 3 and 3a. You are hereby notified that Article II and Article III shall require an amendment there-to. The following has been read for the first time at the regular meeting held April 21, 1995.

ARTICLE II

OFFICERS:

§ 1. The elected officers of the Tamaqua Wireless Association shall be a President, Vice President, Secretary-Treasurer, Activities Manager and a Trustee.

ARTICLE III

DUTIES OF THE OFFICERS

§ 5. The Trustee shall be in charge of all Association"s property not otherwise provided for. All Association property on loan to members shall be recorded and accounted for. He/she shall be entrusted with the Association Amateur Station call sign and shall file a renewal application at the proper time so as to keep said call current.

The second reading will take place at the regular meeting to be held May 19, 1995 at the American Hose Fire Company. After that reading it shall be voted upon for adoption. It takes two-thirds the membership for adoption, therefore your presence would be appreciated.

Vy 73,

A. R. Breiner W3TI - Secretary.