

## CHARLIE'S WHISTLE

By

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Our old friend Charlie, as most loyal readers of these stories know very well, is a retired engineer who throughout his life has enjoyed mentoring and providing guidance to new hams. In fact, most of the hams around DX Hill where Charlie and Mary live understand how their antennas work and how propagation will affect the signal being radiated and received by their different antennas as well as they do mainly because of Charlie's mentoring.

That's why what took place recently was such an awakening for our old mentor. For the last few weeks, as Charlie has been doing his work in the shack, tuning the bands looking for something interesting or working on some piece of gear on his bench, he has been half listening to the local two meter repeater. He hadn't ever done that much in the past but some of his friends have encouraged him to make himself more visible on the repeater. They claim that his comments would provide some good for the new hams that are popping up every day.

But in a very short time, Charlie has become disillusioned with the poor quality of operating being demonstrated on the repeater. Charlie instinctively bristles whenever he hears CB style lingo being used on any ham bands. That doesn't quite make him an objective listener, to say the least. Hearing that someone will be "on the side" rather than standing by or "destinated at his home 20" rather than having reached his home is quite annoying to Charlie. But one commonly used expression struck him in particular as very strange. Many new hams refer to "keying up" when they are transmitting. Any CW operator knows that when the key is up, the transmitter is not transmitting. The more correct expression might be to "key down". Hearing some say "key up" when they really mean that they are transmitting always makes Charlie grin and shake his head at the contrary use of the expression.

But, CB lingo alone isn't Charlie's biggest concern at all. If it were only CB lingo, it would be a little annoying but he could understand that the CB ranks are, after all, the principle feeder pool that provides new recruits to become hams. Hearing recruits use their own familiar terms is understandable. After all, these new hams have already "cut their teeth" so to speak in a different environment before coming to Amateur radio. Have you ever tried to break a bad habit? It's very difficult and it will take time to make these newbies act and sound more like hams.

Since FCC instructed that the code requirement be dropped from all Amateur license tests after February 2007, a flood of Cbers have become licensed as hams. They were enthusiasts who may have had trouble learning code in the past or possibly refused to try to learn previously. Regardless, they are surely here now and our Tech class bands really have taken on the character of the CB band. The operators received their basic training, not from world class mentors like Charlie but from characters with strange names like "big tuna" or "lightning bolt". What results would you expect?

Of course, it would be entirely unfair to assume that the quality of all of Amateur radio is being accurately portrayed by the sample of a couple dozen regular repeater users near DX Hill. Charlie observed that the more normal speaking older hams were noticeably absent on the repeater most of the time. The dialogue and ordinary chatter heard regularly seems to discourage participation on the repeater by traditional hams who don't have CB roots.

But that was not what seemed to bother Charlie most. While listening to different conversations between new hams, he heard some of the most outrageously incorrect information being passed along and discussed as factual. Some of these fellows spoke as if they knew what they were talking about concerning how to install, feed and use antennas with different transmission lines, using antenna tuners, transceivers, effects of propagation and different ham shack equipment. Charlie thought it was shameful that they could be so misinformed and actually believe that they were right. To Charlie's relief, he didn't recognize any of the call signs or voices as being his students. None of the hams that he had mentored would make the serious misstatements being transmitted by the repeater. They would know the facts.

Listening to this gave Charlie a sick feeling in his stomach and he turned off the 2 meter radio and listened instead to a broadcast station playing oldies from the 50s and 60s. These were Charlie's college years and when he met his wife, Mary. His stomach immediately improved.

Charlie had been working on one of his winter projects, building a new remote antenna switch for his tower. The one that is up there presently is a four position switch and Charlie would like to have access to at least six if not eight antennas from his operating position. He would like to hang 80 meters slopers from the tower toward Europe, Japan and the south Pacific. To do that, he needs at least three more open antenna ports. At his bench, he is presently dressing short lengths of one inch wide heavy silver braid from each of the eight rugged relays to the large weatherproof aluminum box he is using as an enclosure. When he is finished, each of the seven antenna positions that are not selected and its relay not activated will be solidly grounded.

Later, Charlie will carefully braid the braid to the box and seal all the junctions in silicone. The relay box will replace the small four position box that is in service now, at the fifty foot point of the tower. The new switch box will be grounded by a silver plated strap, three inches wide that will run straight down the tower to an array of five ground stakes driven eight feet into the ground around the base of the tower and strapped and braided together by a heavy silver plated buss bar. The switch box in service now is grounded only by the fact that it is mechanically mounted to the steel tower. Its ground connection is made through the tower to which it is bolted. Depending on the steel tower with its many bolted joints between sections is not the best way to provide a low resistance path to ground for stray static charges picked up during precipitation or even moving air currents. Of course, a lightning hit would destroy about anything that Charlie had up there, even the tower itself He knows that he cannot design anything to handle a

direct lightning strike and survive. Charlie never liked that ground through the tower arrangement since he installed the box fifteen years ago and vowed that he would change it some day. It remembers saying that it would good enough “for now”. That “some day” has come, a little late but never the less, it has come.

While working on the relay box, he thought of what seemed to be a great idea and wanted to discuss it with Mary. So, he took a break from his work on the bench and headed for the kitchen. He was getting hungry also. On his way to the kitchen he saw that Mary was quietly reading, sitting in her favorite chair in the den. Charlie asked as he headed to the kitchen, “Say Mary, what would you say if I ran some classes for new hams to learn the basics of electronics?” Mary responded without any pause, “Well that’s fine but don’t you have to know the basics to get your first license? Why should you need a class for basics? I’d think you’d need advanced classes.” By Golly, Charlie was astounded! Mary immediately went straight to the core of the issue and told Charlie what should be done. Golly, she is a smart lady. Hams should know their basics but they don’t. They should be learning advanced material at this point but not until they have their basics solidly learned.

He found a freshly baked apple pie sitting on the kitchen counter with a clean plate and fork sitting next to it. A long slicing knife and pie spatula were on the counter in front of the pie. It seems that Mary had expected Charlie to wander into the kitchen looking for something and was prepared for him. Mary called in from the den, “Charlie, could you bring in a small slice for me also, please?” How did she know that Charlie was going for the pie and not an apple or a cookie or something else? I guess it wasn’t hard to guess.

Charlie found a tray and carried in two nice pieces of pie with a wedge of cheddar cheese along with two glasses of milk. Charlie thought about what Mary had said. Passing any of the tests for a license should suggest that the ham had learned and understood the basic theory needed to perform basic duties in putting a station together and operating it. That is totally wrong! Charlie can testify that new hams do not have any idea what a dipole antenna is, that it is a half wave length long or even what half wave length means. They have no idea that feed point impedance at the ends of a dipole is very high and carrying high RF voltage. The center has low RF voltage, high RF current and presents a feedline impedance of between 50 and 70 ohms. This very basic but they have no idea. Charlie has discussed this with Mary previously so she knows how upset Charlie becomes when he talks about the well advertised weekend programs by Gordon West in which applicants are given a money back guarantee that they will pass their license exam during a one full day seminar. Charlie asked the obvious rhetorical question, “How much could anyone possibly learn in a crash program like that?”

Charlie stated the obvious, waving his arms over his head, “They learn nothing! They only learn how to pass the test. They don’t learn a blasted thing about the subject matter and then we wonder why they connect a length of cheap 70 ohm coax to the end of a length of a random length of wire, hanging from their house to the tree in the front yard and don’t know why they blow out the output transistors of their new \$3,000 radio. The impedance at the end of this random length non resonant wire is several thousand ohms,

far from the 70 ohms of the coax cable that they are trying to use as feedline. “After all,” they would say, “my tuner can load the wire on every band from 80 to 6 meters.” Plainly, they have no understanding of antenna basics. They may as well be loading a dummy load. At least doing that won’t blow up their transmitter.

Charlie decided that he must do something. The next morning, he called his friend Mike and asked if he would help him with some classes that he wants to run. The classes will focus on very basic knowledge that every Amateur of any license class should know. Of course, Mike agreed and wanted to know where they would hold the classes, how often should they be held, would a charge be necessary and a few other details that Charlie had blown right past in his excitement to get classes going.

Mary suggested that the classes be held in a friendly restaurant that sells good food. Golly, she is s treasure to have on your team. She’s right, of course. The old missionary’s tactic of feeding the stomach before feeding the soul and mind still works. A good affordable menu will also attract people to come. Mary suggested a nice restaurant at the intersection of the interstate highway and Summit Road, only five miles from DX Hill. The owner and chef of the place is a cooking friend of Mary’s and they often cook new recipes together. Mary was sure that her friend would be happy to reserve some space in which to hold the class.

The plans started to come together as Charlie thought more about it. Now, his only worry will be whether a large number of the folks he heard on the repeater will come to the classes. He must have faith. As was stated in the movie, “A Field of Dreams”, if you build it, they will come. Come, they will indeed.