

CHARLIE'S WHISTLE

By

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Charlie accompanied Mary to the shopping mall recently and rather than follow her through the different craft and clothing shops, he sat out in the common promenade of the mall and watched the people coming through the area. One can learn about human nature and gain a better understanding of people simply by observation.

As with nearly everything else in Charlie's life, he compared what he was seeing and hearing to his experience and knowledge in Amateur radio. Of course, the other shoppers were not hams but represented a cross section of the public, not all of whom were fully informed, well behaved or even courteous. Most folks were very pleasant and interesting to observe, however.

Mary moved along down the mall and approached a very large Barnes & Noble Bookstore at the end of the mall promenade. Charlie suggested that stopping in their coffee shop for a muffin and some coffee would be nice. Mary agreed. They went in and found a nice place to sit, peaceful and away from the traffic flow. Charlie stood in line to obtain their refreshments, still observing others around him.

The concession at Barnes & Noble is run by Starbucks, so after trying to interpret the "Grande" or "Vente" vocabulary and figuring out what flavor coffee to order, Charlie came back to Mary with two very nice coffee rolls along with two grande (large) lattes. They enjoyed their treat while chatting about Mary's purchases and what else she might want to look through on this shopping trip. After a while, she realized that she could find some nice books to send to their grandchildren out in Illinois by shopping right here in Barnes & Noble. That would take care of everything on her list for today. Then they could go back home and have time to make a nice dinner.

Mary quickly gathered her purse, coat and latte' before hurrying off to the back parts of the store where children's books were sold. Charlie sat there alone, sipping his drink and looking around. The realization struck him that being in a bookstore like B&N was similar to tuning the 40 or 20 meter bands when the bands are open. There is so much diversity to absorb and so much knowledge to be learned. In the store, there are untold quantities of knowledge to be gained on nearly any subject known to man and even some merely theorized. It's similar to a large metropolitan library except that the books on the shelves are not archival in nature but current and newly released books and other documents.

Charlie rose and walked down one row marked medical reference and slowly read the titles of the books on one shelf and then another. Then, he looked on the opposite side and saw different ones, some topics he couldn't pronounce. In the next aisle, he found reference books for automotive repair, structure plumbing and electrical work.

In another aisle, he found reference books that were written to help people find employment. In short, it impressed Charlie as a panacea of current information, far more relevant than the library and presented in a manner very simple to review.

It reminded Charlie of his DX experiences by all of the different subjects, sizes, colors, styles and manner of presenting themselves. On the air, we hear strong and weak stations, slow and fast sending, good and not as good ops, closer and much further away DX. Like the bookstore, the variety and available choices seem without many limits.

Of course, DX and ham radio are never far from Charlie's conscious thinking, so it should not come as much surprise to anyone that he and possibly only he may look into a Barnes & Noble store and find a parallel comparison to DX.

As Charlie rounded a corner and started down the aisle that had engineering books, he found a young bespeckled fellow sitting cross-legged on the floor with two stacks of books in front of him. He was in rapt concentration, taking notes and drawing charts. On a large clipboard, he had filled several dozen pages and was well on his way to filling dozens more. Charlie recognized the lad as a member of his ham club but couldn't remember his name or call. He interrupted him by saying, "Pardon me, son. Aren't you a member of the valley radio club?" The fellow looked up and recognized Charlie. He jumped to his feet and said, "Oh yes, hello Charlie. I'm Bill. I just joined the club during last Field Day. I'm working on an engineering assignment for school. I'm trying to get it finished by next week. But, the more data I discover, that deadline is looking further out and more impossible."

Charlie was an engineering manager and a pretty good design engineer as well. So, he pulled up a stool that a clerk had left behind and sat next to Bill. "What sort of engineering are you studying and at what school, Bill?" He replied, "Well, I'm working on the design of a high efficiency RF power amplifier for the Draper Laboratory multi-chip module process. I'm a third year student at MIT." Charlie asked Bill if he had heard of his favorite student, Brian who graduated from Tech a few years earlier. But Bill didn't know Brian. Bill was still in high school when Brian graduated.

Charlie leaned over and tried to get some appreciation of what Bill was trying to develop. He surely had taken plenty of notes. Charlie observed, "Gosh Bill, I hope the store doesn't charge you by the page in your notes. With all those notes, you could buy all the books you have stacked around you for the same money." Bill grinned and agreed.

Charlie then saw that Bill had outlined a fairly involved set of design steps leading up to completing his MCM power amplifier. It has been quite a few years since Charlie did his engineering work at MIT but he still remembered one of the most basic rules in engineering; "keep it as simple as possible". Designing an amplifier using many stages and user adjustments is not the best way to do it unless there is no alternative.

Charlie asked if he could see his notes, hoping to be able to find a few nuggets of work that could be eliminated without losing any functionality. After an hour's worth of work

and one more cup of coffee, Charlie was able to cut down Bill's design by several small steps without any obvious sacrifice to the design of the amplifier.

Bill learned a very valuable lesson from Charlie in this experience. He really appreciated Charlie's suggestions and thanked him warmly. Charlie also thanked Bill for letting him exercise his old brain cells and was happy to discover that he hadn't forgotten some of what he had learned so many decades before. He recalled a simple lesson taught by one of his systems engineering professors nearly 60 years earlier. Essentially, it said "the best and most cost effective engineering design is the one that is elegant".

Charlie spent his career following that and thousands of other principles he had learned both at MIT and at Cal Tech where he received his MBA. Employers, government agencies, universities and any other user of engineering skill appreciate engineers who have that skill and will promote those engineers who best practice it. Charlie and Brian are very good examples and most likely, now Bill will join the list.

Mary appeared carrying several books and some CDs and DVDs, She appeared quite pleased and showed Charlie a DVD she was buying for them to watch while having dinner. It was the new movie, "Julie and Julia", a story about Mary's hero, Julia Child. It was a good day. Everyone gained something and enjoyed their time doing it.