

Keen Talk . . . or Ketone Talkin'?

George Fox Lang, Associate Editor

EPA be damned, acetone is marvelous stuff! Old sailors recognize it as the “right stuff” for removing the surface oil from teak prior to varnishing or gluing it. Younger ones use it to clean up that god-awful mess associated with fiberglass repair. No self-respecting mechanic, carpenter or painter would be without an ancient rusted can of the stuff for cleaning tools and machinery, and I’ve known very few women who didn’t keep a small stash of scented acetone to remove nail polish.

However, inhaling that sweet aroma while chilling your fingers with a rag dipped in this elixir can have some bad effects on the human carcass. Long before this becomes a critical issue, you can enjoy the rush of a contact high. For me, this often manifests as the need to write a slice-of-life observation accompanied by a peculiar clarity of vision regarding its content. Of course, such mental keenness evaporates as rapidly as the liquid itself.

A cold post-Thanksgiving afternoon found me at my workbench doing some minor repairs to three small electrodynamic shakers. These units are old and trusted work compatriots. I purchased them in 1980 and since then they have helped me test literally hundreds of small structures (and associated testing electronics) without requiring even minor maintenance. But time had finally taken its toll on the rubber dust seals surrounding the drive tables. At the quarter-century point, these had simply decided to dry and crumble.

The repair was a simple one to effect. Remove four screws; lift the aluminum top cover from the body and the shaker lies open. No need to even free the dust cover from its groove on the aluminum drive table, the ravages of time had already done this! The worst part of the retrofit was cleaning the residue of adhesive (and decomposed rubber) from the top plate and drive table. Hence, the acetone . . . and thence the clarity of thought.

Replacing the seals was simply a matter of Glyptol®-bonding the new ones to the top plates and reassembling my old friends. LDS had sent me four new seals in response to my telephone conversation with their President, asking for *three*. These arrived rapidly with an invoice simply marked “with our compliments.” I was taken with the kind

and old-fashioned courteous prose of that document, the rapidity with which the needed parts arrived and the fact that an un-requested spare was provided in case I proved a ‘duffer.’

But then, in the clarity of my acetone high, the reason for all of these good things became blatantly apparent; these actions reflected the nature of the guy at the top. When I spoke with Dominic Acquarulo, I asked him if this was a repair I could make. He not only affirmed it was, he immediately *gave me detailed instructions* on how to do it. The man in charge knew how many screws to remove and what to do next with one of the least expensive products in an extensive product line. In short, he knew the details of his offerings from hands-on experience.

Why, you might ask, is this such a big deal? The answer is simple – most of today’s businesses are run by people who haven’t a clue about the technical details of the expensive products they proffer or the needs of the people who buy them. The support services provided by such vendors reflect this top-tier ignorance. Companies that are run by people who truly understand their products, the application of those products and the day-to-day needs of their customers are becoming fewer and they deserve our support. If we don’t give it to them, we will have only ourselves to blame for the mediocrity of remaining vendors available to us.

It has always been difficult to build and maintain a successful business. This is particularly true if the target audience for your products and services is a narrow niche. There are few markets narrower or more technically challenging than the pursuit of dynamic excellence in products and processes. The sound and vibration practitioner has long been blessed by a stream of inventive people who have focused their business energy upon a small market. It becomes increasingly difficult for them to do so.

Modern industry has become the home of the professional middle-man, a personal anathema who is sucking the lifeblood from the American economy by replacing old fashioned technical creativity, home-brewed productivity and the guts to stay-the-course with outsourcing, right-sizing and many other *boardroom newspeak* excuses for

mortgaging the future to make this quarter’s numbers. These guys (and gals) are easy to recognize. They dress well, speak eloquently (save their tendency to squawk “shifting paradigms” and hawk the newest acronyms to a nauseating degree), drive fine cars, know all of the trendy clubs and restaurants including wine lists and are ready to make a sales pitch on a second’s notice. But, they lack depth and substance; they don’t know which screws a customer can remove from a product of theirs without inducing expensive havoc. They don’t understand the core stuff of their chartered enterprise. Their only expertise lies in morphing it into something else in pursuit of a quick dollar return.

The hardy pioneer who brings a really new and needed product to market and then *evolves himself* as he builds a successful business to serve a narrowly defined market has been vanishing from the American scene. We will miss these heroes when the last one expires. The middle-men who will pretend to fill their void will give us only mediocre offerings and lip (instead of) service. We will deserve this fate if we fail to support the small businesses that try to surface to serve our needs or turn our backs on the established ones that have. Our success as a nation is strongly linked to the success of our technical innovators who choose to run the entrepreneurial gauntlet.

Over the last four decades I have taken occasional breaks from sniffing ketones to actually indulge in the industrial process. It has been my good fortune to wear the harness of several good enterprises and that of a couple of real losers. Without doubt, the high point of my career was my years with Federalcum-Nicolet Scientific Corporation and the reason for this was the character of its founder, Henry Bickel. Henry is the quintessential American technical entrepreneur. He is a gentleman in the truest sense of that word and a man of quiet courage. I am very proud to have been associated with him and the products his genius begat.

I became enamored of signal processing while working at the General Motors Proving Ground in the (old) Noise & Vibration Laboratory. I took some interviews in the industry with the strong expectation of joining Spectral Dynam-

ics in sunny San Diego. I visited Federal Scientific in their “nondescript Harlem loft” (as the *New York Times* called it in 1973 when the Watergate tapes were analyzed there) strictly as a salary data point. What I found there in the shadow of Columbia University was so exciting that the horrid location became irrelevant; I had to become part of their effort. I came home and told my wife. “I just took an interview in the worst hell-hole factory I’ve ever seen . . . and I’m going to go to work there.” It proved to be a sound life decision, one of the best I have ever made and one of the few I have never regretted.

The move from Ann Arbor, Michigan to a New Jersey suburb proved a domestic disaster. Somewhere in the months between accepting the offer and buying a new home (remember when proper notice was more than two weeks?), the mortgage rate in NJ hit the usury ceiling at 8.5%. Banks responded to this by requiring a 40% down payment for a home in an already expensive market. We bought a miniscule 3-bedroom ranch house (read formerly two bedroom with usable closets) and paid more in property taxes than our total cost of Michigan housing in the prior year. That enticing salary increase rapidly evaporated into the litigious NJ mists and I became an embattled NYC commuter.

However, the job proved to be excellent. I had joined forces with some of the most talented people I have ever known and found myself welcomed by the best friends a fellow could ask for. Our small company was really quite family-like and we were guided by a “good Papa” (and three skilled ‘uncles’ – Dick Rothschild, Reinhold Volgel and Harold Klipper). Federal’s products were innovative and quality was a watchword, long before American industry was choking on the ISO 9000 red herring.

In that era, before our acquisition by Nicolet, Henry sat in sole benevolent final judgment of every new product before its release. He invited me to join this rite for the UA-500 RTA about to roll out. We met at the factory on a Saturday morning. Henry came armed with his notebook of personal test experiments and wore his tan “testing sweater” sans tie. This, I later found, was his sole departure from more formal business garb, reserved exclusively for such testing. We spent a long day examining all aspects of that new instrument; I learned more about what a spectrum analyzer should do in those few hours than several semesters could ever have imparted. This was the key to what made our stuff so good . . . the guy at the top made sure it was right before anyone else got it . . . and he knew exactly how to verify that chapter, line and verse.

I also watched Henry grow as our busi-

ness grew. (I know – that sounds like David claiming he observed a change in Goliath’s height.) The man was always a very quick study, but he was also a consistent and considered scholar. His copious note-taking and meticulously maintained files of all matters technical were a legendary part of the company’s heritage. With growth, his focus shifted to matters of strategic and financial planning. He showed no less brilliance here than in the electrical engineering he loved and understood so well.

Henry was born to lead (although I suspect he might choose to refute my statement). He has a kind, generous and gentle manner and I have never known him to deal unfairly with anyone. He set very high standards for personal ethics and performance *for himself* and gave all of us around him every opportunity to rise to that level. He also gave us a generous allowance for failure regarding performance, but *never for integrity*. Federal Scientific is gone now, but those of us who worked there will never forget that wonderful experience we shared together or the guy who made it possible. Sharing Henry’s dream was just plain fun and we all hope just a little of his ‘class’ rubbed off onto each of us.

Henry is now the Vice President of Business Development for LeCroy Corporation in Chestnut Ridge, NY. He may be reached at henry.bikel@lecroy.com. This old mule enjoys the freedom of working out of his own barn these days. As a sole practitioner I cannot duplicate what Henry, Dick, Reinhold and Harold accomplished in-team, but I can earn a living while working to the same ethical standards . . . and I can even stop for an occasional whiff of acetone, if I so choose.

I have worked in other stables, but none that so clearly bore the clean smell of integrity that permeated the stalls of Federal Scientific. In the lesser shops, the guy at the top seemed more adept at shoveling “stall droppings” and whipping his herd than in figuring out how to define a new mission and harness team energy to accomplish it. Perhaps my *middle-man* description was simply too polite and *bull-and-mule pusher* might be more appropriate. Even a dull-witted and hard-working ass can differentiate between being led by insight and genius and simply being beaten out of desperation by an unfocussed ego wallowing in confusion. I have been in both places and I know the difference!

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The employees of Federal and Nicolet Scientific are holding a reunion on April 29-30 at: Holiday Inn, 329 Route 303, Orangeburg, NY. For more information, contact: kris@bluebird-technologies.com.