

## STRANGE RADIO STORIES OF YORE

Circle round the campfire, while Grampa Dan tells you some weird tales about radio engineering in the grande old days!

Perhaps you've already heard the yarn about radio stations where the engineering department blacklisted the playing of Crystal Gayle tunes. It seems the young lady's singing voice could, and did, hit certain combinations of notes that would cause the grids in Eimac's 4CX15,000A's to vibrate sympathetically. The net result was that every time the station played a Crystal Gayle song, the tubes' internals would vibrate and short out, and the transmitter would overload and shut down. You can imagine the skeptical response that this story first received. After they got up from the floor laughing, however, Continental engineers (whose transmitters were tripping) did a little field work and they did finally confirm that this was indeed what was happening.

Early FM exciters were not the most stable of beasts, and some of the early modulated oscillators didn't take too well to the heavy bass drum tracks supplied by rock and roll bands, especially if they were combined with an aggressive processor. The result was usually loss of frequency lock, and a moment or two off the air. Better exciters, with 2-stage phase locked loop circuits, were rapidly deployed.

In the mid-1970's, a lot of attention went into various tricks to give the station's sound a competitive edge. Especially at Top 40 stations, the programming department might "fiddle" with hit songs to "improve" them, by messing with equalization and compression, before carting their masterpiece for use on-air. Many programmers would also edit bits and pieces out of songs to create a suitable broadcast version. One of the favourite tricks was to speed up the turntable for the dub just a bit, on the theory that once listeners heard the sped-up version, the original, slower edition of the song (hopefully still being played on the competing radio station) would sound dull and lifeless. Of course, given the simple techniques in use, speeding up the record also increased the pitch... and operating on the proven programming premise that if a little is good, then a lot is better, what started as a very slight adjustment rapidly escalated into something much worse. I can remember Beatles tunes where the Fab Four sounded like they were singing falsetto. Digital pitch conversion, that would have allowed separate control of pitch and speed, was not yet on the broadcaster's horizon.

Another trick that started out simply, then became more elaborate over time was the use of reverberation. Simple to perform with many digital processors today, back then the preferred approach involved transducers, springs and microphones. The theory was that the resultant sound was fuller, and louder, and perhaps made a transistor radio with a three-inch speaker sound a little better than it would have with untreated audio. The spring method worked, but

there were a few shortcomings: the reverb unit was microphonic (i.e. it would be best to keep fairly quiet when you were around it, as your voice could easily set the spring to vibrating, and you might inadvertently end up on the air!), the sound could be metallic, and there were certain frequencies that needed to be avoided, or the spring would start to resonate, and given sufficient provocation, really take off. All I can tell you is that there was a Paul McCartney tune called "Mull of Kintyre," that featured an extended bagpipe solo, and every time I heard it on our station I heard what sounded like a bunch of cats harmonizing on the chorus. Mercifully, the song was only a minor hit, or I would have been forced to institute a "no bagpipes" rule at the station, and you can imagine the standoff that would have caused with Programming!

Of course, once programmers started messing with the razor blade, one thing led to another, and it culminated in broadcast duets that never really happened, like Barbra Streisand's performance of "You Don't Bring Me Flowers" with Neil Diamond. This sort of thing proved so popular that record companies started producing authorized "synthetic duets," and that can be followed in a straight line to today's sampled, looped and dubbed hip-hop material.

Oddly enough, nowadays much better tools for manipulating tunes are available, yet the practice (in radio stations at least) seems to have mostly disappeared. And perhaps we are all the better for that!