

WORKING FOR DENTRON RADIO COMPANY, 1981-1983

Transceivers, Linear Amplifiers and an Olds Toronado

Getting involved with Dentron Radio Company

In 1981 I was contacted by Dennis Had, then W8KXK, about doing some work for Dentron Radio Company of Twinsburg, Ohio, which he had founded in the mid-1970s. The product he contacted me about was the model HF-200D 80/75 to 10 meter transceiver, a new version of the company's HF-200 SSB-CW transceiver with added digital frequency readout. The HF-200 was designed by someone who had departed the company and it had various performance issues Dennis sought to have corrected in order to make the transceiver competitive with other products on the retail market. Born in 1949, I was in my early 30s at the time, and had held an amateur radio license since 1963. While in high school, I worked for Bernie's Ham Shack from 1965 to 1967, selling and servicing amateur radio equipment. Bernie died at age 54 in 1967 and his wife decided to close the store. I continued to work there for several months trying to sell off the inventory, then moved on to the amateur radio department at Pioneer-Standard Electronics in 1967, selling and servicing amateur radio equipment. As a result, I became fairly well known in amateur radio circles. I continued at Pioneer while in college; the retail stores were sold to Farr Electronics in 1971, and I remained there until 1974 when Farr went out of business. I soon formed my own business, repairing home high fidelity equipment and installing commercial sound equipment, including public address systems and intercoms.

At Dentron, I was given an HF-200D to see what I could do to improve it. Problems were caused by the long leads in the RF cir-

cuitry affiliated with the bandswitch, along with routing and shielding issues. It became clear there was no easy path to better performance without radical changes.

Dentron was originally founded to make a vacuum tube transverter to put a 75 meter station on the 160 meter band, as in the mid-to-late-1970s no USA-built SSB-CW transceiver covered 160 meters. It sold quite well, and Dentron went on to make antenna tuners and linear amplifiers. They had three popular linear amplifiers by 1980: the GLA-1000 built with four color TV horizontal sweep tubes (GLA stood for Great Little Amplifier), the Clipperton L (named for the DX-pedition) using four 572-B tubes, and the MLA-2500 using a pair of Eimac 8875 transverse forced air cooled external anode triode tubes.

Dennis found a buyer for Dentron Radio Company; the new president of Dentron was identified as Morris Messenger, who claimed to be W6PUT. He had an investor who bought Dennis's interest in Dentron. This led Dennis to leave Dentron and move to the Carolinas, where he started an audio company plus another amateur radio company. He still lives in North Carolina, his call is W4USR, and he has a very interesting Web page.

Dentron had no engineer when Morris Messenger took over in October 1981. He contacted me about working full-time for Dentron; as an incentive to take the job offer he promised me a leased car paid for by the company. I accepted the job with a starting date of December 01, 1981, however, I kept my repair and installation business and worked at Dentron on weekends and a few evenings. Fortunately, I had a full-time employee in my office; she did a fine job of run-

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ning the business. Two friends worked for me part-time, repairing stereo equipment. In 1982 I sold the business to a stereo equipment store I had done work for; they purchased it as an operating business and I continued to work there whatever hours I could. After about eight months at Dentron, I got the promised leased car, a blue 1982 Oldsmobile Toronado coupe. It was a very comfortable and pleasant automobile, if quite gutless, as were many new cars in the early 1980s. It was the fourth car Dentron had leased; the lease agent was delighted I wanted a USA-built car. Morris had an Audi 5000; his wife had a Fiat 124 sport convertible and our financial person had some type of premium Japanese car.

Products I designed at Dentron

The first new product I designed for Dentron was known as the MLX-Mini, a small SSB-CW transceiver running about 25 watts input power with digital frequency readout. It operated from a 12 to 15 VDC power source. Models for 80/75, 40, and 20 meters were made in hundreds of units each; prototypes for 160, 15, 10, and six meters were built but not produced in quantity. The Dentron Scout, a solid state SSB transceiver for the Civil Air Patrol, was also produced in the hundreds of units to replace the discontinued Heath HW-18-1 crystal-controlled vacuum tube SSB transceiver kit.

Morris Messenger planned to import the Japan Radio Company (JRC) NRD-515 general coverage digital frequency readout receiver and NSD-515 transmitter. These units were two-tone gray, darker than Collins grays, so any new versions of amplifiers I updated used the JRC gray colors, black National Radio Company knobs and Modutec panel meters.

I redid the Clipperton L linear amplifier into the Clipperton QRO; the new version used a large printed circuit board that fit over the four sockets for the 572-B tubes; it also contained the tuned input circuitry to make the amplifier compatible with solid state radios. This redesign cut out more than 50% of the assembly time required for building the amplifier, which significantly improved the

profitability of building this unit. The current GLA-1000B was upgraded to the GLA-1000C with the addition of 160 meters. The new model GLA-1000C had new colors, knobs, a new meter, and a significant cut in the assembly time.

I designed, and Dentron produced, antenna tuners to match the already-produced Clipperton L linear amplifier and the GLA-1000 and GLA-1000B; they were designated as the Clipperton T and GLT-1000. Both had internal directional wattmeters, 4:1 baluns, and 6:1 reduction drives on the two tuning capacitors. Hundreds of each were produced and shipped. A smaller run of the MLT-2500 tuner was made; it used a rotary inductor with a digital position indicator along with the features of the other tuners. Antenna switching on the MLT-2500 used relays; it could be done remotely if desired. Versions of all three of these tuners in two-tone gray with National knobs were planned as the next product runs, but became victims of the bank's shut-down of Dentron about June or July of 1983.

Prototypes I built at Dentron that did not make it to production

The MLA-2500B linear amplifier was not a current product when I started at Dentron; I built a prototype of a new version to be called the MLA-2500C using a pair of RCA-type 8122 external anode tetrode tubes in the final amplifier. I always thought the 8122 was an excellent tube to use; it has plate dissipation of 400 watts and uses a low-cost tube socket. Three prototypes for linears using 3-500Z tubes were built; they were called the Galion I, Galion II, and Galion III amplifiers using one, two, or three 3-500Z tubes in parallel to cover 160 to 15 meters, including the WARC bands. Ten and twelve meters could be restored by a simple modification done by the end user to comply with new FCC regulations for the manufacturing of linear amplifiers, adopted in 1978 in a largely futile effort to keep amateur radio linear amplifiers off of the 11 meter Class D Citizen's Band (CB). The Galion I and Galion II were table-top amplifiers and the Galion III was a floor
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