Telephony 101 – Stromberg-Carlson Anti-sidetone Circuits February 25, 2013

Hello All,

As always, please send any questions about the reading assignment directly to me at oldtimetelephones@goeaston.net. I will bundle questions if necessary, repeat the questions, and give answers in an e-mail to the TCI List Server before moving on to the next reading assignment. This way everyone will benefit from these questions and answers. By sending questions directly to me, we will avoid unnecessary clutter on the List Server. Previous reading assignments, notes, questions, and answers are available in the TCI Library at http://www.telephonecollectors.info/telephony-101/.

Please start reading in Chapter 17 on page 138 and read through page 140. This is a short reading assignment, but I don't want to combine it with the Automatic Electric reading material.

Stromberg-Carlson made its own AST circuit and put it in the No. 1212 "Fat Stromberg" telephone, which came out around 1936. I did not make measurements on this circuit and provide only a plausible explanation of how it works. But a complete wiring diagram is provided along with properties of its No. 45A induction coil, so you should be able to get your Fat Stromberg in working order.

For its later phones starting around 1940, Stromberg-Carlson used the WE AST circuit. The circuit is rearranged a little in the S-C hookup, but you can see it is completely equivalent to the WE circuit. A complete series of tests I ran on this S-C circuit confirm the equivalence. The No. 46A coil was used in S-C subsets and in the No. 1222 combined telephone. The identical-looking No. 1243 telephone and later S-C phones of the 1940s used a potted network circuit similar to the last one described in Table 17-3.

The S-C No. 1543 phone with this circuit came out at a time when independent companies were still serving rural communities with local-battery service. Stromberg-Carlson modified the coil in its potted network to add extra sections and extra taps in the windings. With one combination of connections you could get an induction coil that had properties like the WE No. 101A coil for the common-battery AST circuit. With another combination of connections you could get a coil that had properties similar to the WE No. 104A coil for the local-battery AST circuit (next chapter). Thus without any equipment modification, this phone could be used for either CB or LB service. Really clever!

If there are any questions about the current reading assignment, we will deal with the questions before moving on to the next reading assignment.

Ralph