

Cars and Cathodic Protection

Watch out for fraudulent gadgets!

“There is a sucker born every minute” is a statement attributed to P.T. Barnum of circus fame who also opined that “every crowd has a silver lining.” This apparent truism has encouraged all kinds of grifters, con men, and other scoundrels to devise schemes to separate the fools amongst us from their money. In an age where science and the scientific method are thought to be capable of daily miracles, it came to be understood that many people could be bilked by purchasing gadgets that were promoted using pseudoscience and slick advertising materials. These devices cover a wide range of applications, from water treatment to the cathodic protection of automobiles.



Many of the inventors, manufacturers, and promoters of these devices are aware that they do not perform as advertised but, rather than improving the device to offset criticism, rewrite their advertising. For example, a manufacturer marketed a device that was said to be able to cathodically protect an automobile. The sales literature provided by the manufacturer indicated that the device worked on textbook principles. When it failed some simple tests, the manufacturer side-stepped his critics by inventing a new theory of operation called “capacitive discharge oxidation interference” and proclaimed that conventional tests were no longer valid. This beats having to make it work. Fortunately, the U.S. Federal Trade Commission was not amused and put him out of business.

I have been told many times that these questionable devices work in the field or in industry but, because of some inherent “shyness,” refuse to perform under test. Many allegations are made that “big industry” conspires against the progress of science and victimizes the small entrepreneur who merely wishes to better the world. Devices I have examined are remarkably similar and seem to have been copied from some prototype. They consist of an electronic switch that connects to the positive terminal of the car battery powering three light-emitting diodes that blink in a pleasing sequence. The anodes, of which there are usually two, are inside plastic boxes that are affixed to the autobody front and rear by means of two-sided adhesive tape. The only method of energy transfer would be from capacitive coupling. At a measured 57 pico-farads, the current said to be conferring protection was one millionth of that used to power the lighting display. The total value of components in these devices was less than \$10 and they retailed for between \$299 and \$600, but then why should a sucker get an even break?

Many promoters of these devices are litigious, very prickly, and are quick to silence opposition by the threat of lawsuits based on the claim that any criticism will damage their business potential. I suppose this stance could be taken by a bank robber who objected to the display of his “wanted poster” in the post office. Caveat Emptor!

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