At right is the General Ionics Model IQ Bacteriostatic Water Softener, a home use system that not only softens municipally treated water but also inhibits the growth of bacteria within the filtering unit. It was developed by Ionics, Incorporated, Bridgeville, Pennsylvania, international water consultants and manufacturer of water treatment equipment for municipal, industrial and consumer use.

The bacteria growth arresting feature of the Model IQ is based on NASA silver ion technology developed to purify the water aboard the Space Shuttle. In Shuttle use, an electrolytic water filter generates silver ions in the water flow; the silver serves as an effective bacteria inhibitor and deodorizer.

The NASA technology has been used in several water purification products, among them a line of home water filters developed by Ray Ward, president of Bon Del, Chula Vista, California. Ward was assisted in his development effort by Ionics, Incorporated. The latter company helped him design his equipment to make the most efficient usage of silver impregnated carbon (activated carbon helps remove objectionable tastes and odors).

Some time later, Ionics vice president Walter J. Poulens learned that some countries in Europe were considering a ban on water softeners that breed bacteria. It occurred to Poulens that the silver ion technology, on which he had worked with Ward, might be the answer to a water softener that would not breed bacteria.

Ionics used the NASA technology as a departure point for company development of a silver carbon of such density that it would remain on top of the water softening resin bed where, Ionics' research indicated, the greatest bacterial growth occurs. After extensive company testing, the Environmental Protection Agency evaluated the process and found Ionics' silver carbon to be an effective bacterial growth inhibitor.