
Spinoff from a Moon Tool

Cordless products based on Apollo technology typify aerospace derivatives for home, consumer and recreational use



Among the most important tasks performed by Apollo astronauts on the moon was collection of lunar rock and soil samples for later analysis on Earth. Much of the material was gathered on the surface, but, for comprehensive assay of the moon's crust, scientists also wanted to look at subsurface soil. This necessitated development of a special lunar drill capable of extracting core samples from as much as 10 feet below the surface.

The drill had to be highly efficient to cut through the sometimes hard lunar surface layer, and, like everything that went to the moon, it had to be lightweight and compact. Most importantly, it had to have its own independent power source. Although the tool could have operated on power from the Lunar Module, the astronauts' home and operating base, scientific requirements dictated sampling at diverse locations, some of them far from the base.



The job of developing the drill was entrusted to The Black & Decker Manufacturing Company, Towson, Maryland, which responded with a battery-powered, magnet-motor system that proved successful in lunar work. In the course of the development, Black & Decker used a specially-developed computer program to optimize the design of the drill's motor and insure minimal power consumption. That computer program, along with the general knowledge and experience gained in developing the drill, provided a stronger technology base for continuing company development of battery-powered implements. Black & Decker has refined the original technology and now produces a line of consumer, medical and industrial cordless tools and appliances.

The most recent device to reach the commercial market is the "Dustbuster," a miniature, hand-held vacuum cleaner for the

home or auto. The Dustbuster has no hose, no cord, is only 14 inches long and weighs less than two pounds; thus, says the company, it offers a convenient means of quick cleanup after spills without wrestling the standard home vac out of the closet. The Dustbuster also provides an easy way to clean hard-to-reach places where dirt and crumbs accumulate, such as corners, shelves, stairs, around plants and behind cushions. The mini-vac comes with a storage bracket that also serves as a recharger; plugged into a home outlet, it charges the

nickel-cadmium batteries when the appliance is not in use.

Along with the Dustbuster, Black & Decker's line of home-use cordless implements includes drills for the handyman or hobbyist, shrub trimmers and grass shears, all of which are rooted in Apollo technology. The company also manufactures a number of cordless tools used in the sheet metal, automobile and construction industries, and a line of cordless orthopedic instruments for hospital use. The latter are separately covered on page 94.

Black & Decker's Dustbuster (opposite page), a cordless miniature vacuum cleaner for quick pickup in hard-to-reach places, traces its origin to a battery-powered lunar drill developed by the company for the Apollo program. Among other Black & Decker cordless products rooted in the same technology is a hand-held home drill (upper photo), also usable in construction tasks (right) where a power source is not readily available.

