Computer Component Tester

The NASA publication *Tech Briefs,* a quarterly compendium of new technology available for transfer (see page 118) has been the source of many spinoff products and processes. In most cases, an item in *Tech Briefs* supplies a lead, which interested firms can follow up by requesting a Technical Support Package that provides more detailed information. In some cases, however, the information in *Tech Briefs* is by itself sufficient to inspire a new development. An example is the work of Carlos F. Horvath, senior engineer of Burroughs Corporation, Paoli, Pennsylvania, which manufactures large computer systems.

The equipment pictured was developed by Horvath as a better way of testing ECL (Emitter Coupled Logic) chips, integrated circuits used in Burroughs' computer systems. The equipment shown is an AC/DC tester with an associated ramp voltage generator. The latter, a separate development that is an accessory to the basic tester, is the rectangular box at the front edge of the table. The AC/DC tester includes the circular bank of switches and the pin board in the elevated panel adjacent to the ramp voltage generator. The instrument at left is a plotter that records test results.

The AC/DC tester checks out ECL logic devices and their functionality within the computer. Each ECL device has a specific task in the computer's operation and the tester determines whether the device is performing that function properly. Horvath's invention allows rapid manual checking without extensive programming, as is required by other test methods; thus the ECL tester makes it easier to find out what is malfunctioning, and it also does the job faster. With minimal training, anyone can use the equipment, where prior test systems required highly skilled technicians.

Carlos Horvath reports that a single article in *Tech Briefs* provided the information that led to his development of the ramp voltage generator. The AC/DC tester did not evolve from any specific article but from an accumulation of information on new electronic circuit and component technology published in a number of issues of *Tech Briefs*.