

# Takeda Riken's continuing contributions...

## • Promoting intelligent measurement

Over the past several years, the use of microcomputers incorporating LSI's has brought about rapid advance in measuring instruments technology. This area of technology is referred to as "intelligent measurement".

Takeda Riken is actively pursuing the ideal in intelligent measuring instruments: the development of measuring instruments which automatically provide the required data when the object under measurement is connected to the input of the instrument.

To some it may seem that this level of intelligence has already been achieved. But what is required is a conversational capability through the instrument by an operator with the object under measurement. This capability should be applicable to all fields—experimental, production-line, field-servicing and other uses.

Although many fields remain unexplored with respect to development of measuring instruments having such intelligence, Takeda Riken is already taking the first steps in this direction. In our new computing digital voltmeter, computing counter, automatic microwave counter and digital spectrum analyzer, we have incorporated such intelligent functions as automatic memory of maximum value, statistical processing and measurement-data storage.

The electronic measurement technology that Takeda Riken has gained over the years, covers super-precise measurement of voltage, current and frequency—the fundamental quantities of electricity. We devote our fullest efforts to staying at the leading edge of signal conversion techniques to assure expanded applications and the fullest use of computers. Throughout the 1980's, our goal will be the continued integration of established technologies and creative ideas to further promote intelligent measurement.

## • Gaining a leading position in VLSI testing technology

The LSI has become as essential to electronic products as iron and oil are to daily life.

In a relatively short period of time, Takeda Riken has won recognition as a leading manufacturer of test systems for development and production of LSIs and VLSIs.

Domestically, we lead all other companies in volume of deliveries, while worldwide we are ranked second. This result is

the outgrowth of the extensive effort we have poured into this field since the first Japanese 1C test system was announced in 1972. Our rising technological stature is further attested to by the world's first 100MHz VLSI test system, manufactured and delivered by Takeda Riken in 1979.

Domestically and internationally, the users list of Takeda Riken LSI and VLSI test systems is led by manufacturers of semiconductors and computers and related research laboratories. Research and development of LSIs and VLSIs and their manufacture cannot proceed smoothly unless aided by reliable testing systems. We are proud that our products are closely associated with such an important task.

The technologies represented in LSI test systems are diverse. They include large-scale computer technology, high-speed and high-precision electronic measurement technology, our own test-pattern generation software technology and CAD (computer aided design) technology. Further advances in these and other technologies is another of Takeda Riken's important goals for the eighties.

## • Innovation and reliability are winning for Takeda worldwide

In addition to the engineering innovations and high reliability the industry has known to expect from Takeda Riken, product development efforts are based on sound core and leading-edge technologies as well as on a never-ending struggle for improved cost performance. The result of this system is a line of products that have earned praise for technological excellence and high reliability, not only from demanding domestic Japanese customers, but from users in more than 30 countries, including the U.S. and European countries as well. In addition to Takeda Riken's far reaching sales representative organization, covering more than ten countries, the Takeda Riken international organization includes a subsidiary in the U.S. capable of complete LSI test system services from sales to after-sales maintenance, as well as a service location in Europe. Takeda Riken stands ready to meet the challenges of VLSI development and production—with high-speed test systems available from no other source—and is actively pursuing this field worldwide, continuing to make dramatic contributions to semiconductor manufacturing, as well as to the computer manufacturer and research organization.

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| <p><b>• DC Amplifier and A-D Conversion Technologies</b></p> <p>Takeda Riken combines a vast amount of fundamental measuring technology with advanced DC amplifier technology to achieve highly stable and accurate measurement of extremely small voltage and current. The technologies incorporated in our analog-to-digital converters, highly stable voltage generators and physical quantity linearizers are the result of this sound technological basis. The same applies to our 7-1/2 digit digital voltmeter, digital thermometers, systems voltage generators and other products. All of these are high-performance products which, when utilized with a microcomputer, achieve more intelligent measurement.</p> | <p><b>• High-speed pulse /high-frequency technologies</b></p> <p>In 1957, Takeda Riken marketed the first electronic counter made in Japan. Since then Takeda Riken has kept pace with advances in communications technology and has introduced direct counting 100MHz, 500MHz and 1000MHz counters. High-speed pulse technology enabled us to manufacture the world's fastest— 100MHz—VLSI test system and our high-frequency technology provided the base for the manufacture of spectrum analyzers for analyzing the frequencies of radio waves.</p> | <p><b>•Applied Computer Technology</b></p> <p>Applied computer technology has opened a new age to measuring instruments. This technology is used in a variety of commercial systems and is shared in LSI test systems and those with GP-IB. It also plays an important role in the intelligent measurement program of Takeda Riken. In conjunction with its software technology, including use of the FFT algorithm, applied computer technology is now being incorporated in our digital spectrum analyzer as a first step toward enlarged intelligent measurement.</p> |
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To see Takeda Riken's technology development from 1960 thru 1983, [click here](#)