



# TREK INC

## SERVING THE NEEDS OF THE ELECTROPHOTOGRAPHY INDUSTRY

### Enabling Electrophotography Processes and R&D Applications

TREK, INC. (est. 1968) has had a close association with - and commitment to - the electrophotography industry. This relationship was established via Trek's innovative designs for electrostatic voltmeters and corona charging power supplies. These products play an essential role in electrostatic image-forming processes. This electrophotographic technology is utilized in laser printers, copiers, fax machines and many other printing devices. Electrostatic voltmeters are used in electrophotography R&D quality control, manufacturing, field testing, and frequently provide feedback for process adjustment. Trek also supplies products for precise toner charge-to-mass ratio measurements and continues to develop solutions to address the needs of this industry.

#### Precise Measurement of Electrostatic Voltage

Trek is an expert in electrostatic measurement technologies and instrumentation, with specific expertise in the precise measurement of electrostatic charge on dielectric surfaces and powders, by way of the company's leadership role in electrophotographic applications. Trek's noncontacting electrostatic voltmeters are prevalent in this industry for making dark decay, light decay, and charge uniformity measurements on photoconductors, drums and belts. Additionally, Trek provides a system for precisely measuring the net charge on toner particles.



#### Charge-to-Mass Ratio Measurements (Q/m)

Trek's Charge-to-Mass Ratio System (Model 210HS-2B) is a unique, small and portable Q/m analyzer which provides repeatable high accuracy toner charge measurements. It utilizes the "draw-off" toner transfer method to determine the charge-to-mass ratio characteristics, and is capable of measuring single or dual component developers. This unit can be used directly on the production line as well as in the laboratory. It employs unique technology to avoid measurement errors that can occur with other systems.

#### Corona Charging Supplies

Trek provides high-voltage amplifiers for corona charging, with the ability to precisely control the corona voltage or current. The company has also developed charge roller supplies which are specifically designed to simultaneously provide the AC and DC operating potentials required to operate/control an electrostatic charge roller.



#### Innovative Contacting Voltmeter

Trek's recently introduced Infnitron™ (Model 800) is an ultra-high impedance voltmeter instrument which enables contacting voltage measurements to be made with virtually no transfer of electric charge to/from the measured object, unlike other products in the market that transfer charge upon contact. It addresses the need for site-specific measurement, as critical surface phenomena become more important with the miniaturization of devices and technologies.

#### Technology Developments

Trek's unique approach to probe design allowed the company to address a need in electrophotography decades ago - and today - as Trek continues to advance the state of the art through basic research and applications development. Technical papers and presentations document Trek's work in this area and demonstrate the company's commitment to technology.

**High-Voltage Power Amplifiers / Piezo Drivers**  
**Electrostatic Measurement Instruments**

# About Trek: A Successful Company with Acknowledged Leadership Qualities

## Founded on Technology

TREK, INC. was established in 1968 to serve the needs of the electrophotography industry for highly accurate, stable, cost-effective measurement instrumentation and devices.

Novel probe design technology provided the foundation for the company's first electrostatic voltmeter, which quickly became the industry standard. Trek's design ensures highly accurate measurements under extreme conditions.



## Growth through Innovation

In the decades that followed, Trek established itself as a designer and manufacturer of high quality instrumentation.

Innovative designs and unique solutions have fueled product development over the years. Trek developed the world's first all-solid-state, high voltage, high-speed, DC-stable amplifier, which is now the product of choice for medium-current ion implantation systems in semiconductor fabrication facilities around the world. As a result of Trek's close working relationship with its customers, new designs are constantly being created to answer the needs of industry and R&D.



## Established Technical Expertise and Application Knowledge

Our scientifically based measurement expertise, coupled with our application knowledge, has enabled us to establish an enviable position in the markets we serve.

We are the experts when it comes to highly accurate measurement instruments and high voltage amplifiers, and the technology that drives them. Customers can depend on Trek to understand both the technical and practical aspects of an application. In many cases Trek is viewed as a virtual member of the customer's product development team.

## Expanded R&D Capabilities

In response to the needs of the marketplace, Trek recently established a separate R&D Center to expand and enhance its capabilities for research and development. In addition, a close working relationship with the nearby State University of New York at Buffalo assures that Trek has access to an extensive array of testing equipment and expertise to complement Trek's internal capabilities.

Whether it is understanding electrostatic discharge (ESD) in a manufacturing facility, or discussing an application with corporate or university R&D professionals, Trek has the knowledge that will make a difference.

## Dedicated to Excellence

Trek has a well-respected reputation for excellence. We are the premier resource for electrostatic measurement and high-voltage solutions due to our product leadership and engineering excellence.

## Committed to the Global Marketplace

Long before globalization was popular, TREK, INC. established Trek Japan KK in Tokyo, Japan for the purpose of providing sales, application engineering support and service to customers in Japan and elsewhere in the Pacific Rim region. A global sales and service network now exists enabling Trek to serve the needs of customers throughout the world.



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**TREK - Experts in Electrostatic Measurement and High Voltage Power Amplification**

**CONTROL WITHOUT COMPROMISE**

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