CONVENIENCE
PERFORMANCE
SENSITIVITY

ease of control
- Simple, Reliable Operation
- Unsurpassed dc Stability
- Fully Remote Tuning and Operation

high performance
- Low Noise
- Large Dynamic Range
- True dc Response
- Wide Bandwidth
- Both Low and High-Temperature SQUID Sensors
- Close Spacing (<2 mm from room temperature)

ease of use
- Auto-Tuning Electronics
- Immunity from rf Interference
- Multiple Measurement Capabilities
- Easy Installation

Wide Capabilities
- Magnetic Fields and Gradients
- Magnetic Moments and Susceptibilities
- Electric and Magnetic Fluctuations
- dc Voltage, Resistance, and Current
- ac Resistance, Self and Mutual-Inductance

Multiple Research
- Physics, Chemistry, and Materials
- Geophysical Exploration and Research
- Non-Destructive Testing and Evaluation
- Biomagnetic Measurements—Clinical and Research
- Custom Systems

TRISTAN TECHNOLOGIES

6350 Nancy Ridge Drive, Suite 102, San Diego, CA 92121
Tel: *(858) 550-2700* ***Fax:*** *(858) 550-2799* ***E-mail:*** *info@tristantech.com*
www: http://www.tristantech.com

SQUID

t e c h n o l o g y

TRISTAN TECHNOLOGIES

INTRODUCTION:

Superconducting Quantum Interference Devices (SQUIDs), tiny sensors that detect changes in magnetic field, are the most sensitive flux detector available. These devices—operating on principles unique to superconductors—have the ability to convert difficult-to-measure magnetic flux into easy-to-measure electrical voltage. Their sensitivity is limited only by the inherent quantum-mechanical nature of superconductivity and, as a result, SQUIDs can measure vanishingly small electric and magnetic signals that other sensors cannot even detect.

APPLICATIONS:

Magnetic sensors have applications in medicine, in geophysics, in industry and in the scientific laboratory. Sensitive SQUIDs can detect the minute magnetic signature of electrical currents in the brain, of flaws in stainless steel structures and of sedimentary layers deep within the earth. Contactless magnetic sensing has applications in neurophysiology, in cardiology, in environmental science and in non-destructive testing. SQUID systems, sensors and control electronics from Tristan are contributing to investigative and analytical advances in many fields.

TRISTAN’S CAPABILITIES:

Tristan is a world leader in SQUID technology. Tristan’s low- and high-temperature SQUID sensors are unsurpassed in real world performance. Our iMAG series of SQUID components includes microprocessor-based multichannel control electronics and advanced fiber-optic-linked flux-locked loop circuits. Tristan manufactures complete SQUID systems for materials analysis, biomagnetic measurements and non-destructive testing based on either low-temperature or high-temperature technology.

From the first commercial closed-cycle refrigerated biomedical SQUID magnetometer to the first commercial dilution refrigerator to operate below 3 mK, Tristan’s expertise in cryogenics has led to advances in both SQUID-based instrumentation and conventional refrigeration. With sensors, electronics, cryogenics and software, Tristan supplies complete solutions for magnetic sensing applications. Tristan is the world’s most comprehensive source of SQUID technology.