# Ground Pro™
## Ground Integrity Meter

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### Your process depends on your grounding. Know it well!

Proper grounding is crucial for the safe and uninterrupted operation of equipment.

In critical environments, a faulty ground connection may result in personnel exposure to dangerous voltages, equipment lockups or malfunctions, and damage to sensitive components. Proper grounding has become one of the most important concerns in facility and tool management.

Ground Pro™ is a dedicated ground integrity meter that offers a suite of features designed to verify critical grounding parameters in any facility. Ground Pro™ measures ground impedance in accordance with ANSI6.1 and ANSI/ESDAS.20.20 standards. One of the key features of Ground Pro is its data integrity— its patented technology allows it to provide accurate measurements of ground impedance when ground noise is present, an area where most regular instruments fail.

In order to maximize precision, Ground Pro measures impedance down to milliohms and automatically cancels impedance of test leads so that even milliOhm values can be read accurately. In addition to measuring ground impedance, Ground Pro also measures AC and DC voltage on the ground while separately measuring high-frequency voltage (EMI). This information is greatly beneficial when performing diagnostics of equipment malfunctions and lockups.

Ground Pro ™ is an essential tool for anyone concerned with ensuring proper grounding of equipment during installation, maintenance, and throughout regular use.

## Applications

Front-End Semiconductors
Photolithography Equipment
Back-End Semiconductor Tools
Disk Drive Manufacturing
Surface Mounted Assembly
Industrial Robotics
Tool Clusters
Medical Environment
Military
Aerospace
Wherever groundng is important

## Features

ANSI/ESDA S.20.20 and ANSI6.1 compliant measurements
Auto-zero of test leads impedance
Broadband EMI measurements
AC and DC voltage measurements
Audio alarms

## Key Advantages

### ANSI/ESDA S.20.20 and ANSI6.1 Compliant

Ground Master measures ground impedance in accordance with requirements of ANSI 6.1 and ANSI/ESDA S.20.20 standards.

### Accurate Readings in a Noisy Environment

Ground Pro provides accurate ground impedance measurements in the presence of noise and ground currents -- something a regular multimeter cannot do.

### Safety

If a ground connection is miswired, it may contain dangerous voltage. Ground Pro can measure voltage on such grounds -- both AC and DC. An alarm level can be set to alert personnel about such conditions.

### EMI

High-frequency noise on a ground increases the probability of equipment malfunction and downtime. EMI can also provide dangerous exposure to sensitive components. Ground Pro measures high-frequency noise on grounds in a broad frequency range -- both average and envelope peak signals.

## Ground Pro™
Ground Integrity Meter
Model CTM051

Credence Technologies

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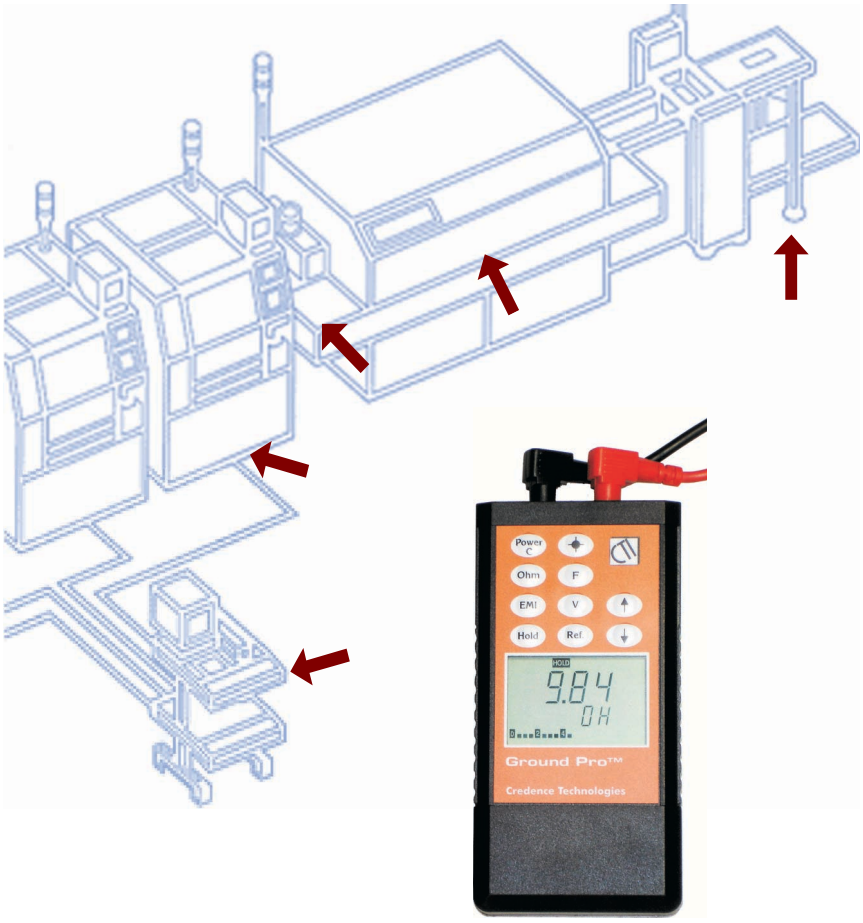


# Specification

| | |
|---|---|
| **Ground Impedance** | |
| Impedance Range | 0.001 .. 1999 Ohms |
| Automatic auto-zero for test leads | |
| **EMI (noise on ground)** | |
| Bandwidth | 9kHz ... 450MHz |
| Measurement Range | -40dBV .. 12 dBV<br>10mV ... 4V |
| Measurement Type | Average<br>Envelope Peak |
| **Voltage on Ground** | |
| AC (50 ... 500 Hz) | 0.001 ... 270 V RMS |
| DC | 0.001 ... 400 V |
| **Reference** | |
| Individual reference setting for each parameter | |
| **Hold** | |
| Hold, Hold Max | |
| **General** | |
| Power<br>Battery | 9V Alkaline |
| Dimension (approx.) | 4.5" x 3.6" x 1.1"<br>114mm x 92mm x 28mm |

## Why a Multimeter Won't Do:

A typical multimeter measures resistance by applying DC voltage to the circuit and measuring voltage drop. Any current in ground connection, which is a common occurrence in a working tool, can easily be factored in calculations and cause a multimeter to produce an unrealistic results, such as negative or extremely high resistance.

Ground Pro' patented technology measures ground impedance while completely ignoring noise and currents on the ground, providing superior accuracy in difficult conditions.

## Why EMI?

High-frequency noise (EMI) on a ground affects the operation of equipment, potentially causing lock-ups and a variety of other malfunctions. Sensitive components such as magnetic heads are also susceptible to damage caused by excessive noise on a ground. To properly control EMI, one must be aware of the full range of signals present. Ground Pro ™ measures high frequency noise in a wide dynamic range—both average and envelope peak signals. An audio alarm sounds when EMI exceeds a set level.

## Ordering Information

CTM051

Ground Pro™ comes with:
- ❑ test leads
- ❑ storage case
- ❑ 9V battery
- ❑ User's guide.

Please contact factory for other options and accessories.

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All specifications are subject to change without notice. Made in U.S.A.