

# 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 grounding 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.

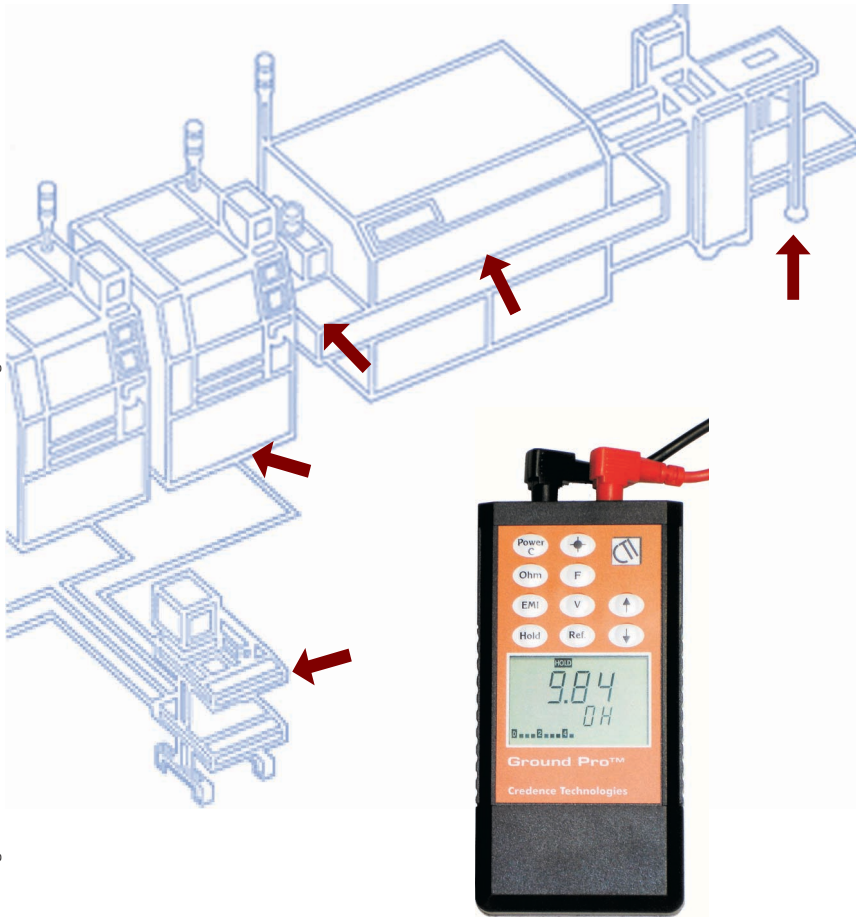
### EMI

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



## 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 10mV ... 4V
Measurement Type	Average 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 Battery	9V Alkaline
Dimension (approx.)	4.5" x 3.6" x 1.1" 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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