

GROUND RESISTANCE TEST EQUIPMENT

Megger is the expert in ground resistance testing. From time saving clamp-on ground testers to specialty models for high sensitivity testing, we have the ground resistance tester to fit your application and budget.

The Megger line of ground resistance testers provides high accuracy, a broad testing range and fast, reliable measurements. Megger ground testers are easy to use and lightweight.

The next few pages will outline the full line of ground testing equipment that Megger has to offer.

Our staff of professionals will help with your technical grounding questions and recommend the ground tester that best fits your need. Call us at 866-254-0962 or search the web at www.megger.com/us

Megger ground testers are very useful in the following markets:

- Airports
- CATV
- Commercial Building
- Electric Utility/Industrial Substations
- Government/Military
- Manufacturing
- Mining (open pit)
- Petrochemical
- Ports
- Railroads/Rapid Transit
- Telecommunications (Cellular, POTs, etc.)
- Universities
- Water/Waste Treatment
- Wind/Renewable Energy

PowerDB Lite, a unique software program, is included with the Megger ground testers.



Ground testing methods covered by PowerDB Lite include:

- Fall of Potential
- Four Potential
- Simplified Fall of Potential
- Slope
- Soil Resistivity
- Star Delta
- 61.8% Rule
- Intersecting Curves

See Page 35 for more information on this powerful software!



3-Terminal Model

This economically priced, general purpose instrument makes routine tests quick and easy for applications on simple grounding systems where a very low resistance is not expected.



- Tried-and-proven analog version
- Will tolerate 2 V peak-to-peak of voltage interference
- Measures ground resistance down to 0.5 Ω
- Limits output to 50 V open circuit, 5 mA short circuit

Selection Guide for Three-Terminal Model

Cat. No.	Range Resistance	Power Source	Display	List Price USD
250260	0.5 Ω – 500 Ω	Battery	Analog	\$910.00

GROUND RESISTANCE TEST EQUIPMENT

DET3 Contractor Series

The DET3 Series of digital ground testing instruments from Megger is comprised of two models: an instrument for grounding and bonding tests and a unit that adds a current measuring function. With this added function, current on the ground rod can be measured for improved personnel safety and noise detection. The DET3TC includes the ART (Attached Rod Technique) method of testing which greatly reduces testing time.

These Megger digital ground testers are powered by eight AA batteries which give excellent testing time — the status of the batteries is given by a bar graph on the LCD. The Megger DET3 Series earth/ground testers is designed to meet stringent safety standards and is rated CAT IV 100V.

Each DET3 comes complete with test leads, stakes, batteries, calibration certificate and rugged polypropylene carry case.



What's in the DET3T Name?

DET3TC

D Digital
E Earth
T Tester
3T 3 Terminal
C Works with IClamp (optional)

DET3TD

D Digital
E Earth
T Tester
3T 3 Terminal
D Disposable Battery

DET4T2 Enhanced Series

The newest ground testers from Megger offer a comprehensive solution to ground resistance and soil resistivity testing needs. The instruments provide such functions as 2 pole, 3 pole, 4 pole, Attached Rod Technique (ART), stakeless, leakage current and ground noise voltage measurements. All models now include selectable output voltage (25 V or 50 V). The DET4TC2 and DET4TCR2 offer four selectable test frequencies (94, 105, 111 and 128 Hz) for improved testing in noisy environments.

An optional ICLAMP augments the traditional fall-of-potential measurement method with ART which allows electrode testing without disconnection and also leakage current measurement down to 1 mA. The VCLAMP, a second optional clamp, enables true stakeless measurements to be made where driving a stake is not practical.

The DET4TC2 and DET4TD2 are powered by eight AA batteries which give excellent testing time. The DET4TR2 and DET4TCR2 are powered from rechargeable AA cells. For added convenience on all four units, the battery status is displayed using a bar graph.

The Megger DET4T2 Series earth/ground testers is designed to meet stringent safety standards and is rated CAT IV 100V.



DET4TD2, above
 DET4TC2, left

GROUND RESISTANCE TEST EQUIPMENT

THE ART OF GROUND TESTING

Ground testing using the ART (Attached Rod Technique) method is more convenient and reduces testing time. **Models DET3TC, DET4TC2 and DET4TCR2** include this additional testing capability.

A nagging problem with traditional ground testing has been the requirement to disconnect the utility connection. Using the ART method you can reliably measure a grounding electrode while still connected and prove it!

The ART method is more convenient and significantly reduces your testing time as much as 40 percent!

The DET4TC2 and DET4TCR2 offer ART capability as well as stakeless testing and of course 4, 3 and 2 pole testing.



DET3 Series Selection Guide	DET3TC	DET3TD
2-wire Resistance	■	■
3-wire Resistance	■	■
ART (Attached Rod Technique) Resistance Measurement	■	
Resistance Range	0.01 to 2000 2% ± 3d	0.01 to 2000 2% ± 3d
Ground Voltage Range	0 to 100V	0 to 100V
Ground Current Range (with optional current measuring clamp)	0.5mA to 19.9A	
List Price USD	\$820.00	\$765.00

DET4T2 Series Selection Guide	Model No.	DET4TD2	DET4TR2	DET4TC2	DET4TCR2
	Cat. No.	1000-347	1000-324	1000-345	1000-346
Tests	2-Pole Measurement	■	■	■	■
	3-Pole Measurement	■	■	■	■
	4-Pole Measurement	■	■	■	■
	Soil Resistivity	■	■	■	■
	ART (Attached Rod Technique) Capability			■	■
	Stakeless (Clamp-on) Measurement Capability			■	■
	Resistance Range	0.01 to 20,000 Ω		0.01 to 200,000 Ω	
	Ground Voltage Range	0 to 100 V			
Output	Ground Current Range (with ICLAMP) Capability	0.5 mA to 19.9 A			
	Selectable Voltage (25/50 V)	■	■	■	■
Power Supply	Test Frequency	128 Hz		94, 105, 111, 128 Hz	
	Alkaline Batteries	■		■	
	Rechargeable Batteries		■		■
Noise Rejection	40 V Peak-to-Peak	■	■	■	■
Safety Rating	CAT IV 100 V	■	■	■	■
Ingress Protection	Rated to IP54	■	■	■	■
Included Accessories	Hard Carry Case	■	■	■	■
	Test Leads (49 ft, 33 ft, 33 ft, 10 ft) and Spikes	■	■	■	■
	External ac/dc adapter		■		■
	Certificate of Calibration	■	■	■	■
Warranty	3 Year	■	■	■	■
List Price USD		\$1,200.00	\$1,445.00	\$1,525.00	\$1,785.00

GROUND RESISTANCE TEST EQUIPMENT

What's in the DET4T Name?

DET4TD2

- D** Digital
- E** Earth
- T** Tester
- 4T** 4 Terminal
- D** Disposable Battery
- 2** 2nd Generation

DET4TR2

- D** Digital
- E** Earth
- T** Tester
- 4T** 4 Terminal
- R** Rechargeable Battery
- 2** 2nd Generation

DET4TC2

- D** Digital
- E** Earth
- T** Tester
- 4T** 4 Terminal
- C** Works with Clamp
- 2** 2nd Generation

DET4TCR2

- D** Digital
- E** Earth
- T** Tester
- 4T** 4 Terminal
- C** Works with Clamp
- R** Rechargeable Battery
- 2** 2nd Generation

Model No.	Cat. No.	Included Accessories								Battery Type		List Price USD
		Hard carry case	4 Right-angle terminal adapters	Leads & spikes	External ac/dc Adapter	Field Calibrator	ICLAMP and VCLAMP	Earth/ground kit, C/N 6320-245	Disposable	Rechargeable		
DET4TD2	1000-347	■	■	■					■		\$1,200.00	
DET4TR2	1000-324	■	■	■	■					■	\$1,445.00	
DET4TC2	1000-345	■	■	■					■		\$1,525.00	
DET4TC2+Clamps	1000-365	■	■	■		■	■		■		\$2,230.00	
DET4TC2+Kit	1000-404	■	■	■		■	■	■	■		\$2,805.00	
DET4TCR2	1000-346	■	■	■	■					■	\$1,785.00	
DET4TCR2+Clamps	1000-366	■	■	■	■	■	■			■	\$2,495.00	
DET4TCR2+Kit	1000-405	■	■	■	■	■	■	■		■	\$3,045.00	



Professional Ground Testing Kit

Can be used with any DET3 or DET4 models

Contents:

- Red and black cable reels (50 m); yellow and green cable reels (30 m)
- Earth electrode lead (4 m green, 4 mm shrouded plug and large croc clip)
- Auger style spikes - 4
- Fiberglass measuring tape, 50 m
- Molded polyethylene carrying case

Ordering Information

Cat. No.	Description	Unit Price USD
6320-245	Electrode and soil resistivity stake and wire kit	\$690.00

GROUND RESISTANCE TEST EQUIPMENT

DET10C and 20C Clamp-on Models

The Megger models DET10C and 20C are a useful addition to the more traditional methods of earth/ground resistance testing that may require disconnection and the use of stakes or ground rods. Simply clamp around the conductor or stake/rod and measure the resistance to ground quickly and accurately.

The DET10C and 20C can be used to measure earth/ground resistance in multiple loop installations without disconnecting the earth or ground, allowing quick and easy testing in total safety.

These clamp-on testers feature improved ground resistance ranges from 0.025Ω to 1550Ω and ground leakage current from 0.2 mA to 35 A.

In a multiple-ground system, the testers will measure the ground resistance of the clamped electrode only, while simultaneously performing a bonding check of the entire system. **Conversely, they cannot be used to test an isolated electrode.**

The units are rugged, compact and have configurable audible alarms. They feature auto shutdown (which is also configurable), data storage and self calibration on power-up, and are supplied with a calibration loop – all contained in a rugged carry case.

The DET20C also comes with a USB interface cable and is compatible with Megger Download Manager Software (included) allowing further analysis and storage of data.



DET10C and 20C come with a rugged carry case, calibration fixture, carry case shoulder strap and interface cable (DET20C only).

Selection Guide for Clamp-on Models

Model No.	Range Resistance	Power Source	Display	List Price USD
DET10C	0.025 — 9.999 Ω 10 — 99.99 Ω 100 — 199.9 Ω	Battery	Digital	\$1,500.00
DET20C	200 — 400 Ω 400 — 600 Ω 600 — 1550 Ω			

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DET2/2 High Sensitivity Model

The MEGGER DET2/2 offers 40 V tolerance and .001 resolution readings. The features of the DET2/2 include an interference filter (on/off) and test current control (high/low). But above all, the test current frequency is adjustable in half-Hertz increments over the full range from 105 to 160 Hz. If soil transients are affecting the measurement, a display annunciator alerts the user.

The extra capabilities of the DET2/2 will quickly prove indispensable when testing in extreme electrical environments around substations or heavy industrials.



Selection Guide for High Sensitivity Model

Model No.	Range Resistance	Power Source	Display	List Price USD
DET2/2	0.010 Ω – 19.99 kΩ	Rechargeable Battery	Digital	\$4,845.00

AC LOOP IMPEDANCE TESTERS

LT300 High Current Loop Tester

The LT300 offers high current loop testing over a wide range of frequencies and supply voltages with simple, fast, two-wire operation. Its large clear display aids visibility in poor conditions.

The LT300 measures loop impedance of live circuits from “hot” to neutral or “hot” to ground. Two loop impedance ranges are provided:

20 Ω — resolution to 0.01 Ω

200 Ω — resolution to 0.1 Ω

The instrument is housed in a rubber armored case with a built-in cover to protect the display when not in use. The IP54 weatherproof rating provides excellent protection in adverse conditions.

The LT300 is supplied with a two wire (red/green) lead set, a certificate of test, and a hard carry case.



Ordering Information

Cat. No.	Description	List Price USD
LT300	High current loop tester	\$680.00