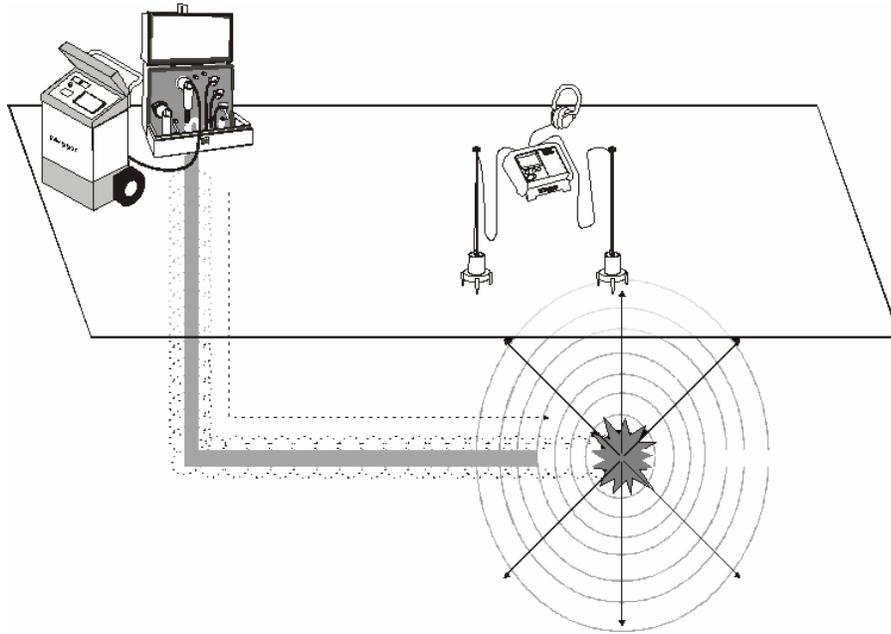


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Overview

Specifically designed for service, industrial and power utility companies the Megger MPP1000 pinpoints faults in shielded and direct buried primary cables via a single or dual probe. The unit can successfully detect both the electromagnetic and acoustic pulses emitted from an arcing fault when it is surged. It can also be used with any Megger PFL Power Cable Fault Locating system/surge generator or other supplier.



The MPP1000 without any acoustic geophone provides

- Detection of the presence of the electromagnetic pulse
- Measures the amplitude of that pulse for a rough location.

The single probe version provides:

- Detection of the acoustic "thump"
- Measurement of time delay between acoustic and electromagnetic signals
- Relative distance calculation

The dual probe version provides:

- Detection of the acoustic "thump"
- Measurement of time delay between acoustic and electromagnetic signals
- Direction and approximate distance to the fault

The instrument's receiver is contained in a lightweight, compact housing that can easily be carried by a "hands free" adjustable strap around the neck. A convenient hook on the knurled poles also allows for safe cable holding. The detector's durable weatherproof enclosure allows for operation in all weather conditions.

A pushbutton controls the volume of the sound in the headphones and can be adjusted for operator comfort. A single mute button is provided to turn off the sound from the detectors.

Applications

The MPP1000 pinpoints faults while the cable is being surged by a surge generator, or "thumper." An arc occurs when the high energy surge delivered from the surge generator breaks the cable fault down and a loud acoustic emission is created. Since buried power cables are typically beneath 3 ft (0.9 m) or more of earth or pavement, this acoustic emission can go undetected without the aid of an acoustic amplification device. In many situations, simple acoustic amplification is not enough. Because acoustic emission from an arcing fault occurs at a single point along the cable path, information such as distance and direction to the fault becomes critical for fast, efficient pinpointing. Without this information, the acoustic emission can mislead when pinpointing the fault.

If the cable fault is in a duct or conduit, the loudest acoustic emission will be detected either at the conduit end or the conduit's actual breaking location. When pinpointing over paving, the loudest sound may be at a crack or seam. Because tree roots tend to carry the sound in all directions, the MPP1000 becomes especially useful. Fast, accurate pinpointing also means less use of the surge generator and thus less stress on service aged cables.

The receiver's display shows the operator the acoustic signal strength and the time delay between the electromagnetic surge and acoustic event. As the detector is placed closer to the fault, the acoustic signal strength increases while the time difference between surge and acoustic emission decreases. When directly over the fault, the time difference is at a minimum and the acoustic level is at a maximum. The same procedure can be used when placing the detector at a right angle to the cable path. Faults can be located more quickly by using a second detector. When using two detectors, the receiver's display will show a direction

arrow; that points to the detector closest to the fault. When the unit is directly over the fault,  will appear.

The receiver's display also provides level of the electromagnetic surge, a measurement of the volume of the acoustic emission, and the time difference between the two events.

Megger.

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Technical Specifications

Operating Modes:	Electromagnetic Pulse Pickup
	Single Acoustic Pickup
	Dual Acoustic Pickups
Range:	0 – 99.9 mS, 0.1 mS resolution
Inputs:	Two for left and right pickups
Output:	Stereo Headphones
Electromagnetic Gain:	Automatic when button depressed to mid scale of bar graph
Acoustic Pickup:	Geophone, 660 Ohm, 40 Hz, 1.22V/in/sec +/- 10%
Acoustic Pass Bands:	125 – 1000 Hz / 500 – 1000 Hz
Display:	LCD with switch able backlight
Battery Life:	= 65 hours with alkaline batteries, continuous use = 85 hours with lithium batteries, continuous use > 200 hours, intermittent, less with backlight enabled
Isolation:	Electrical isolation between handle and pickup
Power:	8, AA alkaline cells
Enclosure:	IP54, Weather Resistant
Ambient Noise Cancellation:	Built into headphones provided.
Operating Temperature:	14° – 122° F
Storage Temperature:	-40° – 158° F
Humidity:	up to 95%, non-condensing
Meets CE requirements:	EN50081-1, EN50081-2 and EN50082-1.
Meets IEC Requirements IEC61010	