

# MPP2000

## Megger Pinpointer



- **Universal pinpoint fault location system**
- **Ergonomic, rugged, weather resistant case**
- **Electromagnetic, acoustic and time delay fault location methods**
- **Displays magnetic and acoustic signal levels**
- **Displays relative distance and direction to the fault**
- **Large backlit LCD**
- **Background interference suppression using selectable filters**

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### DESCRIPTION

The Megger Pinpointer model MPP2000 is specifically designed to accurately and quickly pinpoint faults in underground cable networks. Easy-to-access menus provide advanced users the flexibility and features they desire.

The MPP2000 is housed in a lightweight, ergonomically designed, rugged case that is IP54 rated. The unit can be easily carried “hands free” using the adjustable neck strap. In addition, the instrument can be used with any manufacturer’s surge generator (thumper).

The MPP2000 is used to detect the acoustic and electromagnetic fields. Both fields are generated by the flashover at the point of fault, which has been generated by the HV impulse caused by a surge generator. Detection is via a lightweight ground microphone, which has a physical shield to reduce external wind noise.

For easy interpretation, the receiver’s display shows clear, unambiguous readings. The user interface features standard directional and select arrow keys for easy navigation.

For operator comfort, and for use when the operator is wearing a safety helmet, the MPP2000 is supplied with “behind-the-head” headphones. Active noise-cancelling headphones are available as an optional accessory. Additionally the unit has a built-in “auto mute,” eliminating all ambient noise, which is activated when the ground microphone is raised from the ground.

The unit has an integral loudspeaker, the volume of which can be adjusted for user comfort via the touchpad controls. A single pushbutton “mutes” the output both on the headphones and loudspeaker simultaneously.

The MPP2000 provides:

- Detection of the acoustic discharge (“thump”) and measurement of acoustic signal strength.

- Detection and indication of the electromagnetic signal strength.
- Measurement of time delay between acoustic and electromagnetic signals.
- Indication of the direction to fault.
- Calculated relative distance to fault.

### APPLICATIONS

The MPP2000 pinpoints faults in underground power cables using acoustic, electromagnetic and time delay methods, enabling quick and accurate pinpoint location of underground cable faults.

The location of the buried cable is indicated by the intensity of the electromagnetic field produced by the HV pulses of a surge generator. The bargraph indicator of the MPP2000 shows a maximum intensity of the magnetic field directly above the cable, reducing as the operator moves away from the route of the cable.

Accurate and fast fault locating is accomplished using the coincidence measurement of the acoustic signal, in time relation to the electromagnetic signal produced at the “flashover” or point of fault.

The receiver’s display shows the acoustic signal strength and the time delay between the electromagnetic surge and acoustic event.

When directly over the fault, the time difference is at a minimum and the acoustic level is at a maximum. This is especially useful when the cable is in a duct or pipe where the acoustic signal could mislead the operator.



Behind-the-head headphones fit comfortably even when worn with safety helmet.

## FEATURES AND BENEFITS

- Lightweight receiver with durable weather-resistant enclosure.
- Comfortable neck strap allowing two-handed operation and “hands-free” carrying of the unit.
- Easy-to-read graphical display of acoustic and electromagnetic signal levels.
- Measures distance to cable fault by calculating electromagnetic surge/acoustic emission, providing fast, accurate fault pinpointing.
- Bargraph magnetic field strength indicator.
- Backlit LCD visible in direct sunlight.
- Behind-the-head headphones.
- A sturdy yet flexible wind guard insulates the ground microphone from ambient noises.
- Durable carrying case holds all components.
- Optional noise-cancelling headphones are available.

## SPECIFICATIONS

### Operating Mode

Acoustic and electromagnetic pinpoint fault location — coincidence or time delay — pinpoint fault location — relative distance to fault — direction to fault indication

### Range

0 to 99.9 ms

### Resolution

0.1 ms

### Outputs

Loudspeaker  
1 x jack for headphones

### Volume

Adjustable for both headphone and loudspeaker

### Acoustic Gain

Manual

### Electromagnetic Gain

Manual

### Noise Canceling Acoustic Filters

Digital: (3) HPF, (1) BPF, none

### Acoustic Bands

125 Hz to 1.8 kHz

### Amplification Acoustic Channel

> 0 to 100 dB

### Magnetic Channel

> 0 to 100 dB

### Display Range

00.0 ms to 99.9 msec

### Overflow Display

“OVFL” for distance values > 100 ms

### Frequency Range

120 Hz to 1.8 kHz (acoustic)

### Display

Large, easy-to-read 3.5” color LCD with backlight

### Power

8 standard alkaline or replaceable lithium AA cell batteries

### Battery Life

24 hours continuous usage, alkaline; 30 hours continuous usage, lithium (equates to several weeks/months of normal usage)  
>150 hours intermittent, less with backlight enabled

### Temperature Range

Operating: -4 to 122° F (-20 to +50° C)  
Storage: -40 to 158° F (-40 to +70° C)

### Environmental

Rated to IP54

### Humidity

95% noncondensing

### Dimensions

8 L x 6.5 W x 3.25 H in. (203 L x 165 W x 83 H mm)

### Weight

2.15 lb (.98 kg)

## ORDERING INFORMATION

Item (Qty)	Cat. No.
MPP2000 Pinpointer	
<b>Included Accessories</b>	
Ground microphone	1001-809
Behind-the-head headphones	90003-250
Carry strap	6220-780
MPP2000 (complete) Carry Case	2002-119
“AA” battery (8 required)	23415
Instruction manual MPP2000	81395
<b>Optional Accessory</b>	
Noise-cancelling headphones	36162

### ISO STATEMENT

Registered to ISO 9001:2000 Reg. No. Q 09250  
Registered to ISO 14001 Reg. No. EMS 61597

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Specifications subject to change  
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