



# Fault Wizard™

## Primary Cable Fault Location System

**THE MOST COMPACT, FULL-FEATURED ARC REFLECTION SYSTEM AT A FRACTION OF THE COST**

◆ **Three Modes of operation in one compact unit**

*High Voltage TDR Arc Reflection* technology with automatic readout of distance to fault (no interpretation of complicated waveforms)

*Cycle Thump Mode* for pinpointing

*DC Hi-Pot Mode*

◆ **Adjustable Output Voltage**

◆ **Truly portable**

Battery Powered, weighing only 50 lbs.

◆ **Fault Wizard Software Included**

Allows optional waveform viewing on a computer



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## General Description:

The *Fault Wizard* is a compact, portable, and relatively inexpensive fault location system for primary underground cable. Since the system is battery operated, it can be easily used in remote locations. The system is very easy to operate with minimum training required. The display shows the distance in feet or meters to the fault location. The display also shows the battery voltage, the velocity of propagation setting, the charge voltage, the fault type (open or short), and whether the system is armed for waveform storage. The waveforms can be retrieved for viewing on a computer (laptop or desktop) by utilizing the *Fault Wizard Software*. However, viewing of the waveforms is not required since the *Fault Wizard* gives an automatic readout of the distance to the fault location.

The *Fault Wizard* can be used to perform arc-reflection on cable systems (single sections, half-loops, radials, etc.) for quick power restoration. The *Fault Wizard* will ignore the transformer reflections and “lock” on the fault location. This allows the user to quickly determine the faulted cable section in the system. The *Fault Wizard* will locate faults up to approximately 3 km (10,000 feet). The impulse voltage is variable, which allows lower voltage pulsing and minimum damage to cables. The system has a cycle mode for use in pinpointing the fault with a headset listening device. However, the *Fault Wizard* has sufficient power to often be felt and heard above ground. In cycle mode, the *Fault Wizard's* internal batteries will last over 1 hour (full battery charge) and deliver a 350 J pulse (at full voltage) every 6 seconds. The cycle rate is faster at lower voltage settings. The system also has a hi-pot mode (DC output variable from 0 to 10 kV) for checking the breakdown voltage of the fault in an isolated section of cable or the integrity of an isolated section of cable (to insure the fault is in that section of cable before re-energizing the system).

The battery voltage will flash on the display when the batteries are low and need to be recharged. Battery recharging is accomplished through a mounted AC receptacle. An auxiliary Battery Pack and an AC Pack are available to provide 24 VDC to the *Fault Wizard* for extended field use. Changing the velocity of propagation setting is easily accomplished using buttons located on the panel. The *Fault Wizard's* internal system is environmentally shielded and housed in a very durable rotationally-molded polyethylene case. Three handles are attached to the case for convenient carrying by one or two people.

## Specifications:

Weight:	approximately 23 kg (50 lbs.)
Size:	25.4 x 45.7 x 48.2 cm (10 x 18 x 19 in.)
Power Source:	Internal Batteries (two 12 V sealed rechargeable lead/acid) or Auxiliary Pack
Charge Voltage:	0 to 10 kV
Capacitance:	7 uF
Max Energy:	350 J per pulse
Output Current:	12.5mA for Hi-Pot Mode
Hi-Pot Voltage:	0 to 10 kV
Output Cable Length:	12 M (40 ft) or 4.5M (15ft)

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