

# Fault Mapper™ Pro Telephone/Coaxial/Parallel Cable Tester Graphical TDR Model CA7026



The Fault Mapper Pro™ Model CA7026 is a hand-held graphical TDR (Time Domain Reflectometer) designed for identifying and locating faults on power and communication cables, given access to one end only. The Model CA7026 measures cable length, and indicates the distance to cable faults and terminations to a range of 11,700 ft (3500m), on virtually any type of cable of two or more conductors. The Model CA7026 shows a reflection profile of the cable under test as an

oscilloscope-like trace on a 128 x 64 pixel graphical LCD. A movable cursor can be aligned with points on the trace; the distances displayed will automatically update to the cursor position.

The Model CA7026 has a selectable impedance facility allowing it to be matched to the cable under test. This automatically eliminates the transmission pulse from the display, enabling easier identification of short range faults and terminations.

The Velocity of Propagation ( $V_p$ ) is adjustable between 1% and 99% enabling accurate calibration to the cable under test.

The Model CA7026 incorporates an oscillating tone generator that is detectable with a standard tone tracer, for use in the tracing and identification of cables.

## Features

- Hand-held Graphical TDR (Time Domain Reflectometer)
- Detects opens, shorts, taps, faulty taps, bridge taps, splitters, high resistance, wet cables, splices and more
- Identifies impedance mismatches
- Indicates cable faults and terminations up to 11,700 ft (3500m) in feet or meters
- Works with twisted pair, parallel and coaxial cable
- Selectable cable impedance (50Ω, 75Ω, 100Ω)
- Over-voltage protection up to 250V
- Adjustable cursor assists in locating faults and termination
- Built-in tone generator for tracing and locating cables
- Auto-Ranging scale
- Large high-visibility blue electroluminescent backlit display

## Applications

- Determine length of cable runs
- Find cable faults and the distance to them
- Determine degradation of cables due to moisture and other contaminants
- Trace and identify cables
- Determine telephone cable connections and the length to them



Model CA7026 testing cables in a telephone patch panel.



Model CA7026 includes meter, soft carrying case, BNC pigtail cable with alligator clips, four x 1.5V AA batteries and user manual

## Specifications

<b>MODEL</b>	<b>CA7026</b>
<b>MEASUREMENTS</b>	
Range @ Vp = 70%	11,700 ft (3900m)
Ranges @ Vp = 70%	670, 1470, 2900, 5830 & 11,700 ft (220, 440, 870, 1750 & 3900m)
Resolution	Approximately 1% of selected range
Accuracy*	±1% of range
Range Selection	Automatic range selection against cursor position
Minimum Cable Length	12 ft (4m)
Sensitivity	Minimum 3 pixel return on a fault at 6000 ft (2000m)
Vp (Velocity of Propagation)	Adjustable from 0 to 99% in 1% steps
Output Pulse	+5V into an open circuit or +1.5V into 50Ω load; 25ns min to 2.15μs dependent on range
Cable Impedance	Selectable between 50, 75 & 100Ω
Tone Generator	Oscillating tone 810 to 1110Hz
Scan Rate	Single shot or 6.7 pulses per second (operator selectable)
Voltage Warning	Triggers @ >10VAc/dc
<b>GENERAL</b>	
Display Resolution	128 x 64 pixel graphical LCD
Display Backlight	Blue electroluminescent
Power Source	4 x 1.5V AA Alkaline batteries
Auto-Off	After 3 minutes
Languages	English, French, German, Spanish, Portuguese, Italian
Battery Life	Standby mode >4000 hrs; Continuous testing >7.5 hrs
Storage Temperature	-4° to 158°F (0° to 70°C); 5 to 95% RH non-condensing
Operating Temperature	32° to 112°F (0° to 40°C); 5 to 95% RH non-condensing
Altitude	6000 ft (2000m) max
Dimensions	6.5 x 3.5 x 1.5" (165 x 90 x 37mm)
Weight	12 oz (350g)
<b>SAFETY</b>	
Safety Ratings	EN 61010-1, EN 60950, EN 61326-1
CE Mark	Yes

\*Measurement accuracy of ±1% assumes the instrument setting for Velocity of Propagation (Vp) of the cable under test to be accurately set, and homogeneity of the Velocity of Propagation (Vp) along the cable length. Accurate positioning of the cursor is also required.

# Functional Displays

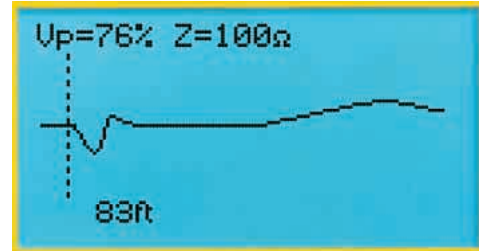
## Typical Traces

The graphic display on the Model CA7026 will display the waveforms associated with the conditions found in communication and other cables. The cursor may be moved to the left or right to indicate the distance to condition. Additionally, the Velocity of Propagation and the impedance is also displayed.

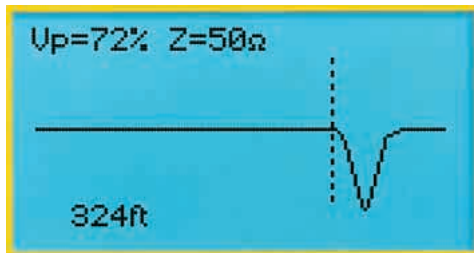
**Open Conductor**



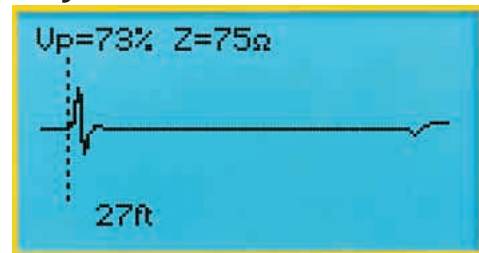
**Wet Splice/Water**



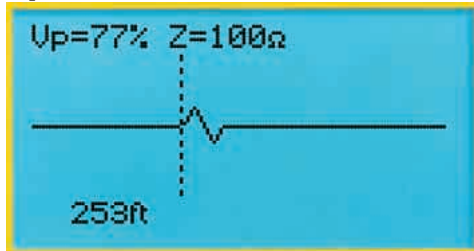
**Shorted Conductor**



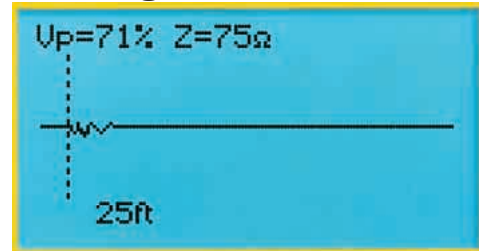
**Frayed Cable**



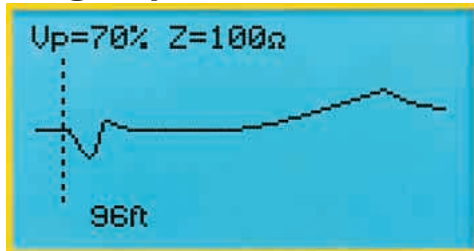
**Splice**



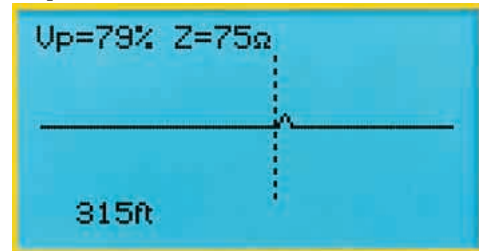
**Water Ingress**



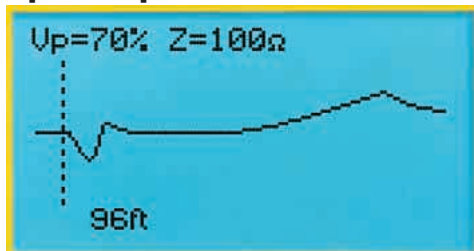
**Bridge Tap**



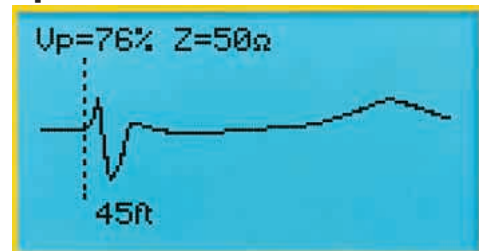
**Tap**



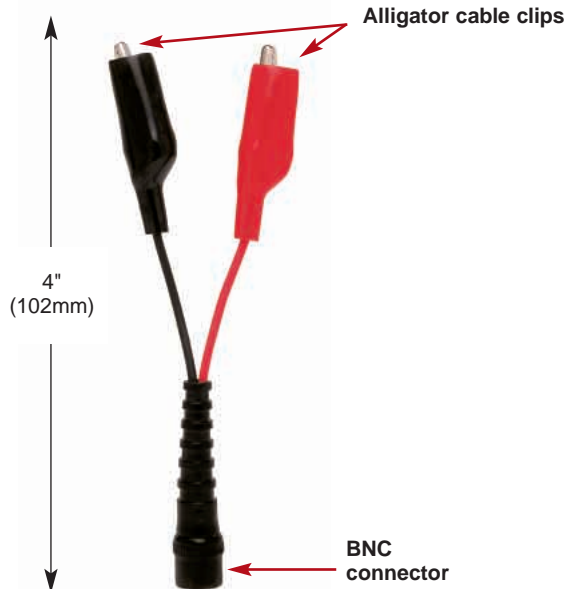
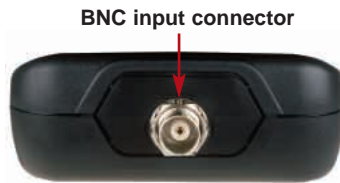
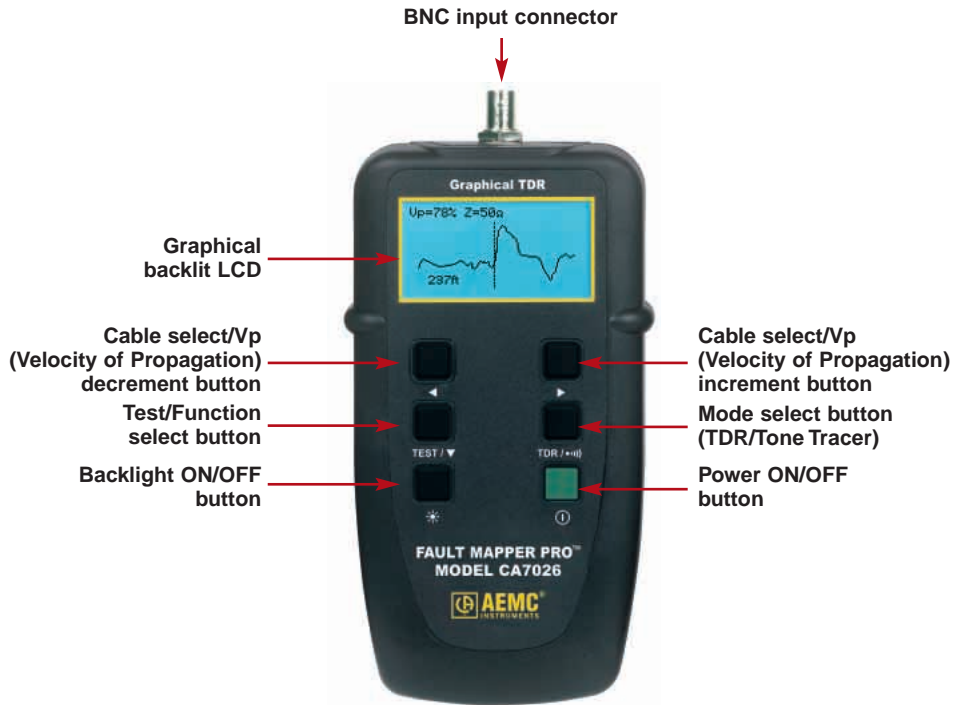
**Split/Resplit**



**Splitter**



# Construction



## ORDERING INFORMATION

## CATALOG NO.

Fault Mapper PRO™ Model CA7026 (Telephone Cable Tester/Graphical TDR)	Cat. #2127.81
Tone Receiver/Cable Tracer Model TR02	Cat. #2127.75

# Tone Receiver/ Cable Tracer Model TR02



Model TR02

The Tone Receiver/Cable Tracer Model TR02 is a small, hand-held tracer that will aid in the identification of tone carrying wires without piercing their insulation. It has a self-contained amplifier and a rugged, moisture resistant mylar cone speaker. When used in conjunction with the tone transmitter function of the Models CA7024, CA7026 or CA7028, wire tracing and locating is quick and efficient.

One button turns the unit on and, while it is depressed activates the receiver. A volume control allows you to set the speaker loudness to a desirable level. An audio output jack facilitates the use of an optional, commercially available ear piece which inhibits the Model TR02's internal speaker. This provides quiet operation in office environments while allowing the operator to hear the signal clearly.

## Specifications

MODEL	TR02
<b>GENERAL</b>	
Power Source	9V Alkaline battery
Dimensions	6.5 x 3.5 x 1.5" (165 x 90 x 37mm)
Weight	12 oz (350g)

## Features

- Compatible with AEMC Models CA7024, CA7026 and CA7028
- Contains a frequency selective hi-gain, hi-impedance amplifier for clear pick-up
- Rugged, moisture resistant mylar cone speaker
- Convenient operation from a standard 9V battery
- Volume control adjustment
- Audio output jack for headphones
- Pen size, fits into your pocket

## Applications

- Locate cable runs
- Detect breaks in cables
- Find cables in panels



Model TR02 used to find cables in a panel.

## Construction

