

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



CE

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 or 3500m (user selectable), for coaxial and other cables 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 backlit 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 0 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 receiver (see page 5), 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 or 3500m (user selectable)
- 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

MODEL	CA7026
ELECTRICAL	
Range @ Vp = 70%	11,700 ft or 3500m (user selectable)
Ranges @ Vp = 70%	670, 1470, 2900, 5830 & 11,700 ft (220, 440, 870, 1750 & 3500m)
Resolution	Approximately 1% of selected range
Accuracy*	±1% of range
Range Selection	Automatic range selection against cursor position
Minimum Cable Length	50 ft (15m)
Sensitivity	Minimum 3 pixel return on a fault at 6000 ft (2000m)
Velocity of Propagation (Vp)	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/bc
Power Source	Four 1.5V AA Alkaline batteries
Battery Life	Standby mode >4000 hrs; Continuous testing >7.5 hrs
Battery Life Indication	Bargraph
Power-Off	After three minutes
MECHANICAL	
Dimensions	6.5 x 3.5 x 1.5" (165 x 90 x 37mm)
Weight	12 oz (350g)
Index of Protection	IP54
DISPLAY	
Display Resolution	128 x 64 pixel graphical LCD
Display Backlight	Blue electroluminescent
ENVIRONMENTAL	
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
SAFETY	
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.

Construction

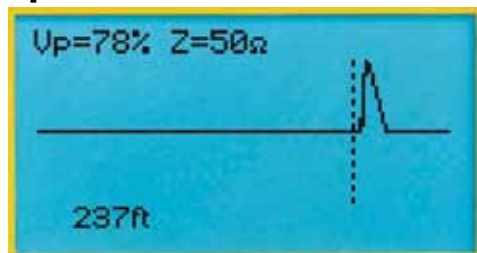


Functional Displays

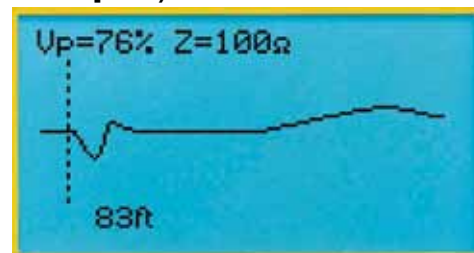
Typical Traces

The graphical 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.

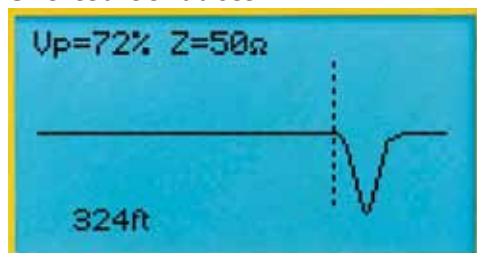
Open Conductor



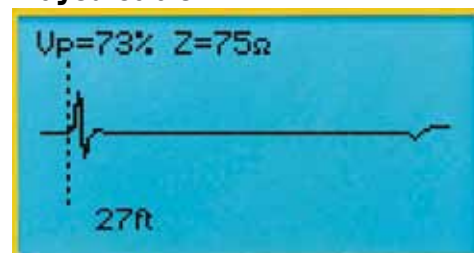
Wet Splice/Water



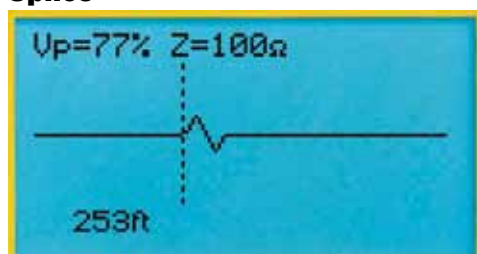
Shorted Conductor



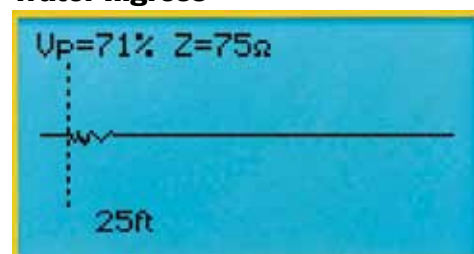
Frayed Cable



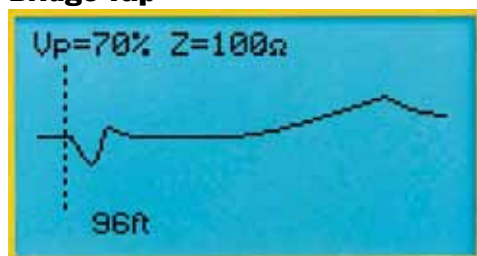
Splice



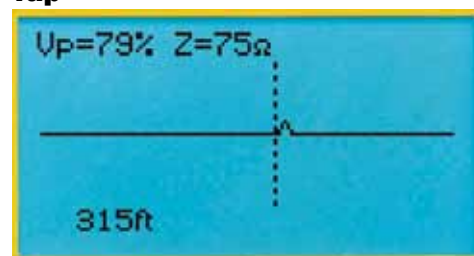
Water Ingress



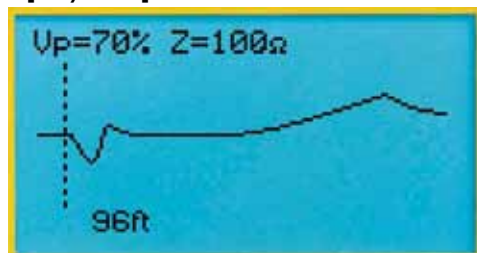
Bridge Tap



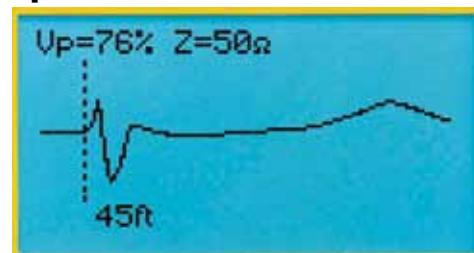
Tap



Split/Resplit



Splitter



ORDERING INFORMATION

CATALOG NO.

Fault Mapper Pro® Model CA7026 (Telephone Cable Tester/Graphical TDR) Cat. #2127.81
Tone Receiver/Cable Tracer Model TR03 Cat. #2127.76

Tone Receiver/Cable Tracer Model TR03

Optional Accessory



Model TR03

The Tone Receiver/Cable Tracer Model TR03 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 and 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 TR03's internal speaker. This provides quiet operation in office environments while allowing the operator to hear the signal clearly.

Specifications

MODEL	TR03
GENERAL	
Power Source	9V Alkaline Battery
Dimensions	6.5 x 1.26 x 1.0" (165 x 32 x 25mm)
Weight	3.18 oz (90g)

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 head phones
- Pen size, fits into your pocket

Applications

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



Model TR03 used to find cables in a panel.

Construction



Contact Us

United States & Canada:

Chauvin Arnoux[®], Inc.
d.b.a. AEMC[®] Instruments
200 Foxborough Blvd.
Foxborough, MA 02035 USA
(508) 698-2115 • Fax (508) 698-2118
www.aemc.com

Customer Support – for placing an order, obtaining price & delivery:
customerservice@aemc.com

Sales Department – for general sales information:
sales@aemc.com

Repair and Calibration Service – for information on repair & calibration, obtaining a user manual:
repair@aemc.com

Technical and Product Application Support – for technical and application support:
techinfo@aemc.com

Webmaster – for information regarding www.aemc.com:
webmaster@aemc.com

South America, Central America, Mexico, Caribbean, Australia & New Zealand:

Chauvin Arnoux[®], Inc.
d.b.a. AEMC[®] Instruments
15 Faraday Drive
Dover, NH 03820 USA
(978) 526-7667 • Fax (978) 526-7605
export@aemc.com
www.aemc.com

All other countries:

Chauvin Arnoux[®] SCA
190, rue Championnet
75876 Paris Cedex 18, France
33 1 44 85 45 28 • Fax 33 1 46 27 73 89
info@chauvin-arnoux.com
www.chauvin-arnoux.com