Mechanical

The instrument is designed for use indoors or outdoors and is rated to IP54.

Case Dimensions	230mm long	(9 inches)
	115mm wide	(4.5 inches)
	48mm deep	(2 inches)
Instrument Weight	0.6kg (1.32lbs)	
Case Material	ABS	
Connectors	BNC Terminal	
Test Lead	300mm long with croc clips.	
Display	122 x 32 pixel Graphics LCD.	

Environmental

Operational Temperature	-15°C to +50°C (5°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)

Ordering Information

TDR 500

Included Accessories

Test & Carry case with strap	6420-125
Lead Set	6231-694
User Guide	6172-726

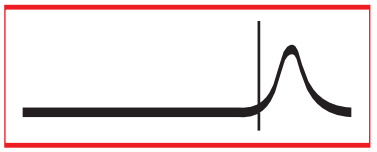
Megger

Megger Limited
Archcliffe Road, Dover
Kent CT17 9EN England
T +44 (0)1 304 502101
F +44 (0)1 304 207342
E uksales@megger.com

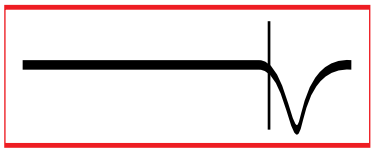
Megger
Z.A. Du Buisson de la Couldre
23 rue Eugène Henaff
78190 TRAPPES France
T +33 (0)1 30.16.08.90
F +33 (0)1 34.61.23.77
E infos@megger.com

Megger
4271 Bronze Way, Dallas,
Texas 75237-1019 USA
T +1 800 723 2861 (USA ONLY)
T +1 214 333 3201
F +1 214 331 7399
E ussales@megger.com

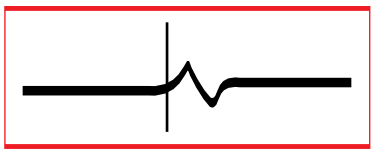
Part No 6172-726 V02 Printed in England 1105
www.megger.com



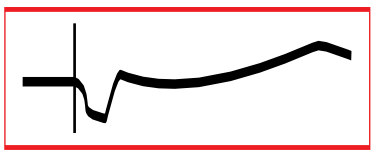
OPEN CONDUCTOR



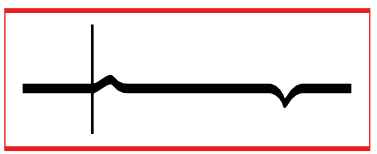
SHORTED CONDUCTOR



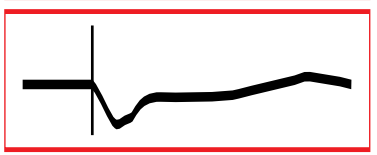
SPLICE



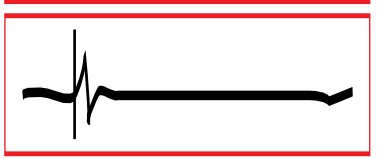
BRIDGE TAP



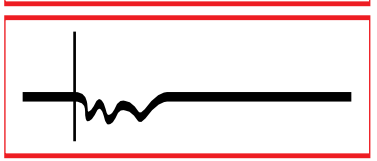
SPLIT/ RESPLIT



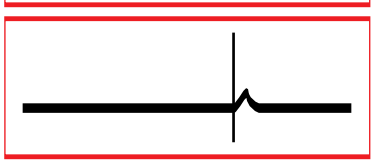
WET SPLICE/ WATER



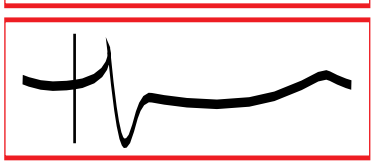
FRAYED CABLE



WATER INGRESS



TAP



SPLITTER

Megger

TDR500 User Guide

TIME DOMAIN REFLECTOMETER

TYPICAL CABLE VELOCITY FACTORS

Main Type	Sub Type	Velocity Factor
Twisted Pair	Polyethylene	0.67
	Jelly Filled Polyethylene	0.64
	PTFE (Teflon)	0.71
	Paper (Pulp 0.083uf/mile)	0.72
	Paper (Pulp 0.072uf/mile)	0.88
Co-ax	Foam Polyethylene	0.82
	Air Spaced Co-axial	0.94
	Air	0.98
	Solid Polyethylene	0.67

TELECOMMUNICATIONS CABLES

Plc	19 AWG 0.72	Pulp	22 AWG 0.67/0.71
	22 AWG 0.67		24 AWG 0.68
	24 AWG 0.66		26 AWG 0.66
	26 AWG 0.65		
		Service Wire	0.64
Gel filled	19 AWG 0.68		
	22 AWG 0.62		
	24 AWG 0.60		
	26 AWG 0.58		

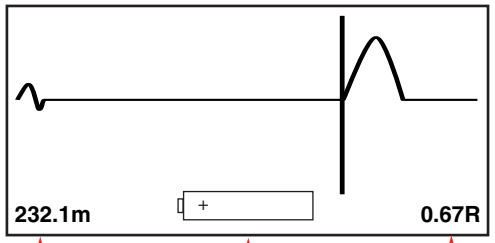
SAFETY WARNINGS

- This instrument is not to be used on energised cable.
- The instrument should **not** be used if any part of it is damaged.
- Disconnect the test leads before accessing the battery compartment.
- Refer to operating instructions for further explanation and precautions.
- **Safety Warnings** and **Precautions** must be read and understood before the instrument is used. They **must** be observed during use.

NOTE: THE INSTRUMENT MUST ONLY BE USED BY SUITABLY TRAINED AND COMPETENT PERSONS

Megger

Megger Limited
Archcliffe Road, Dover
Kent CT17 9EN England
T +44 (0)1 304 502101
F +44 (0)1 304 207342
E uksales@megger.com



Battery State Indicator

Blinking signal gives the warning of low battery indicating when the battery volts drop to 6.5V.

Cursor Position

This indicates the current cursor position in metres or feet.

Velocity Factor Indicator

Indicates the current velocity factor as either a ratio of the speed of light (R), or as m/µs or ft/µs.

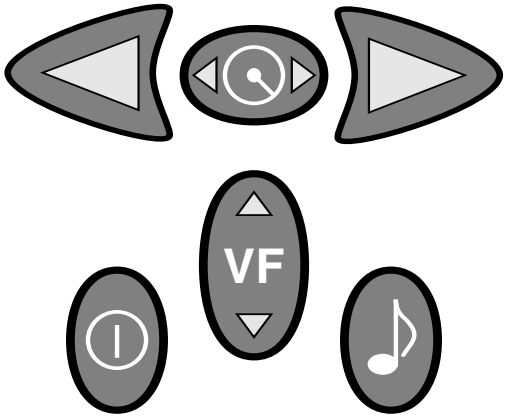
Menu

The menu allows the units of the distance and velocity factor to be changed.

To enter the menu, switch the instrument on holding down the warble key.

To change the displayed units, press one of the velocity factor keys. The options available are m and Ratio, m and m/us, ft and Ratio and ft and ft/us.

When selected, either switch the instrument off, or press the warble key to start testing.



Cursor Left
This control moves the cursor to the left.

Range
This is a bi-directional range control. Press the left side to decrease the gain, right side to increase.

Cursor Right
This control moves the cursor to the right.

Power
Pressing this button will turn the instrument on or off depending on the current state.

Velocity Factor
Use this key to change the velocity factor to a suitable value for the cable under test.

Warble
Press to select the warble functions, or to return to TDR functions. Warble function can be used to trace cables.

SPECIFICATION

Except where otherwise stated, this specification applies at an ambient temperature of 20°C.

General

Ranges	30m, 100m, 300m, 1000m, 3000m. (100ft, 300ft, 1000ft, 3000ft, 10,000ft.)
Accuracy	± 1% of range ± pixel at 0.67VF [Note:- the measurement accuracy is for the indicated cursor position only and is conditional on the velocity factor being correct.]
Resolution	1% of range.
Input Protection	For connection to unenergised cable only.
Output Pulse	5 volts peak to peak into open circuit from 100Ω source. Pulse widths determined by range and cable impedance.
Gain	Automatic with gain and range.
Velocity Factor	Variable from 0.01 to 0.99 in steps of 0.01.
Refresh Rate	Three times a second.
Power Down	Automatic after 5 minutes with no key press.
Warble	5V pk-pk from 100Ω, alternating between 810Hz and 1110Hz.
Batteries	Six LR6 (AA) type batteries, Manganese-alkali or nickel-cadmium or nickel-metal-hydride cells.
Nominal Voltage	9V for Alkali or 7.2V for NiCad.
Battery Consumption	100mA nominal. (30 hours' continuous use.)
Safety	This instrument is to be used on unenergised cable only.
EMC	Complies with Electromagnetic Compatibility Specifications (Light industrial) BS EN 61326-1,with a minimum performance of 'B' for all immunity tests.