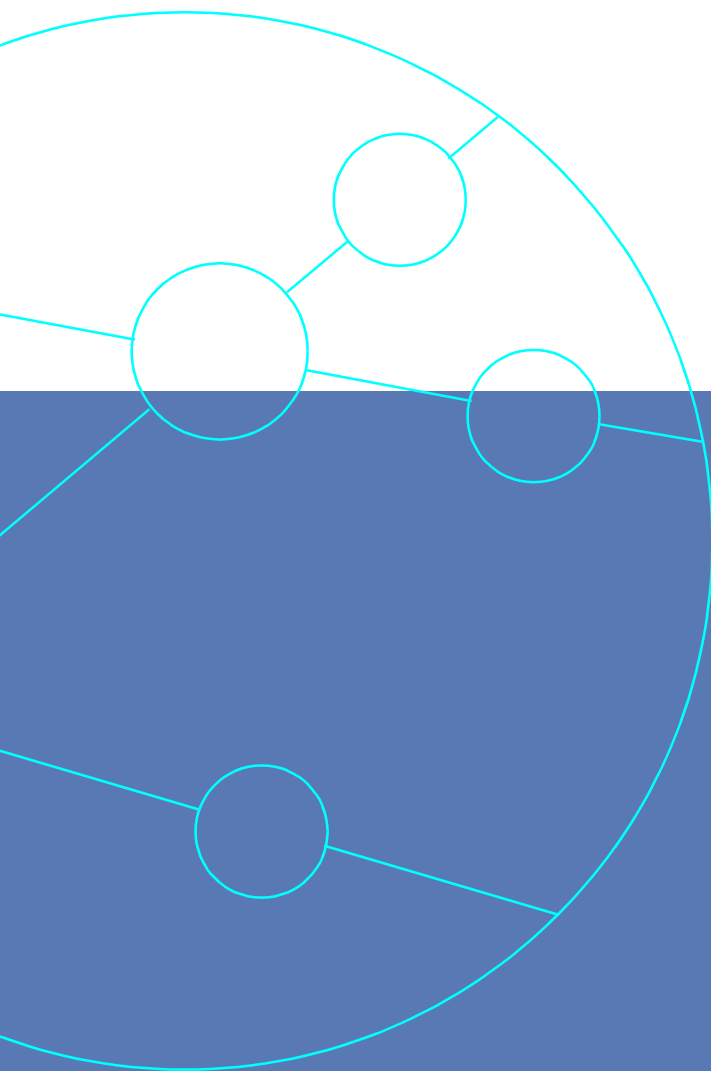


RLC Bridge Function

On the ALT2000 the RLC Function enables the customer to easily check whether the loop length is matching the plant map and therefore suitable for the service.

Application Note ANALT



Testing the World's Digital Networks



TrendCommunications

CHECKING LOOP LENGTH

From just knowing the gauge of the wires (if the far end is short) or the dielectric of the cable (if the far end is open) it is possible to determine, with high accuracy, either the resistance and, without using TDR, the loop length. Since capacitance does not vary with wire gauge or diameter, it is very straightforward to convert a measured capacitance into a distance. Unfortunately unknown laterals can add capacitance to a cable pair and lead to a measurement error where the pair under test measures longer than it actually is.

When the Loop length does not match the map the only tool to detect unknown laterals is the TDR.

The Trend ALT2000 RLC Bridge works using 1KHz signal (AC) for accurate Resistance and Capacitance measurements on the copper pair.

Resistance:

Range; $3\Omega \div 1M\Omega$

Accuracy; $3\Omega \div 9999\Omega : \leq 1\% \pm 1\Omega$

(@C<50nF); $10K\Omega \div 100 K\Omega : \leq 5\% \pm 1\text{digit}$

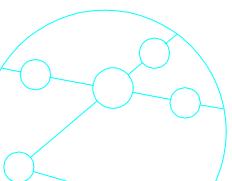
>100K Ω : indicative (grey value)

Capacitance:

Range; $100\text{pF} \div 3\mu\text{F}$

Accuracy; $10\text{nF} \div 500\text{nF} : \leq 1\% \pm 100\text{pF}$

(@R>500 Ω); $100\text{pF} \div 3\mu\text{F} : \leq 5\% \pm 1\text{digit}$



KEY FEATURES INCLUDE

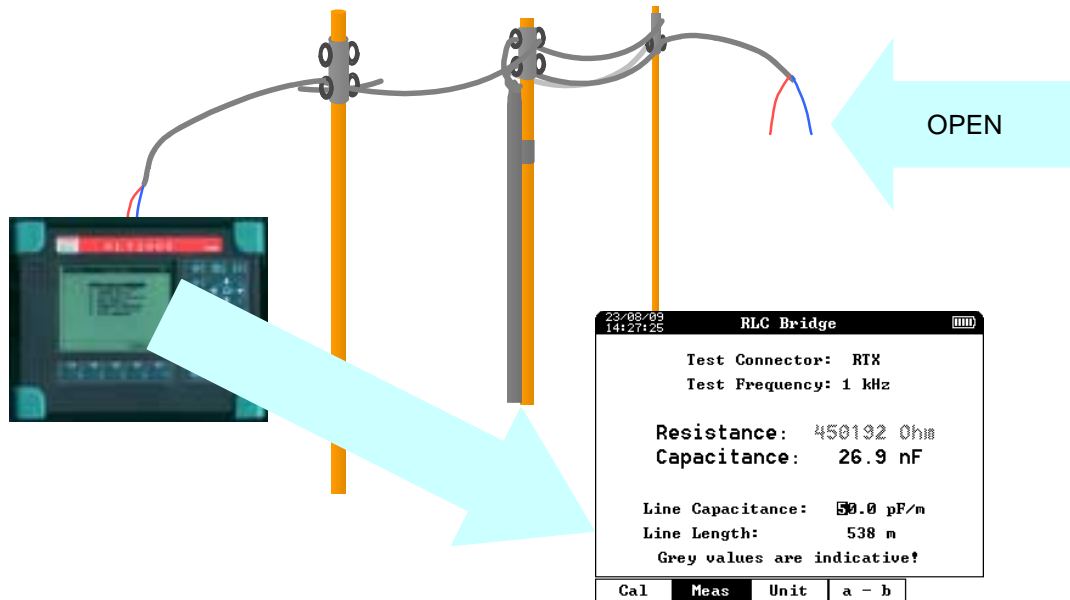


Figure 1 Automatic loop length calculation

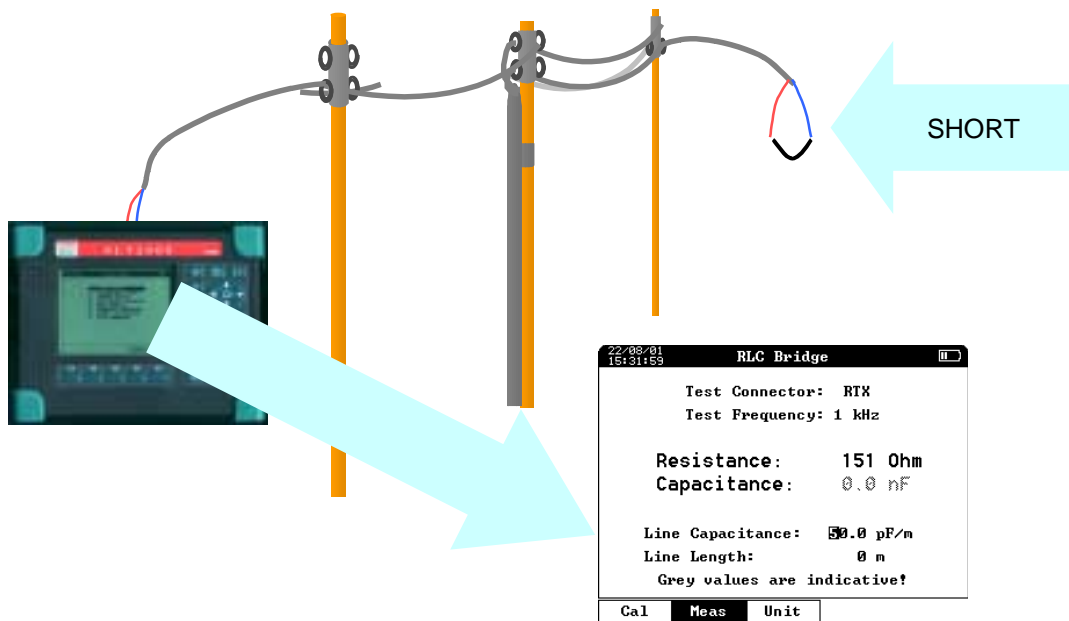
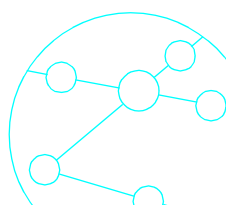


Figure 2 RLC Bridge



The functionality detailed above is available in the latest release of ALT2000. Please contact your Local Vendor or the Trend Communications Ltd Customer Support Hotline (tel: +44 1628 851085) for further information.

You may also visit our WEB SITE at:

<http://www.trendcomms.com>



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