STANLAY™

TEMPO COMMUNICATIONS

SIDEKICK PLUS 1155-5001

Advanced Cable Maintenance Test Set

2019-20

ALL-IN-ONE Cable Maintenance Test Set:

- TDR for Cable Fault Locating
- Leakage / Insulation Resistance Test
- Loop Current
- Capacitance / Cable Length measure
- Tracing Tone generator
- Resistive Fault Locator
- Multimeter function AC/DC Voltage
- Earth Resistance Measurement
- Circuit Loss

Quality In Telecom. Delivered.

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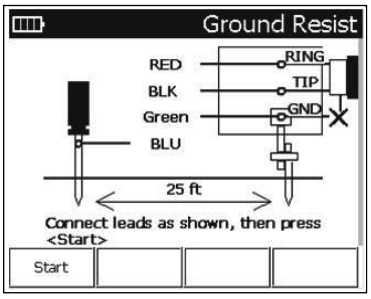
ALL-IN-ONE Cable Maintenance Test Set

Sidekick Plus 5001 is an advanced cable maintenance test set designed to provide cable test, diagnostics and fault locating capabilities for telecom and low voltage power cables, all in one instrument. Manufactured by Tempo Communications U.S.A (Previously Greenlee)

The Sidekick Plus Standard performs the following tests which should routinely be performed by **signalling and telecom departments** to evaluate ability of cable pairs to transmit & receive signals or transfer electrical energy. Key test features of the Sidekick 1155-5001 for Cable testing include:

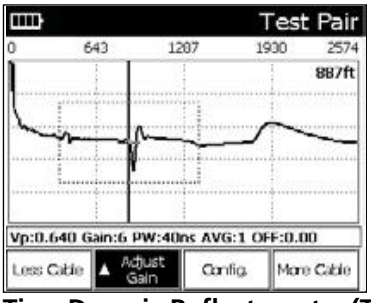
- **Cable Fault location : Advanced Dual Trace Pulse TDR (Zero Dead Zone) (Upto 10kms)**
- **Resistive Fault Locator (Upto 60kms detects up to 20MΩ)**
- **Multimeter (AC & DC Volts) & Loop Current**
- **Ground resistance tester**
- **Resistance & Leakage/Insulation Resistance (1G)**
- **Capacitance /Cable length (Open meter)**
- **Cable Stress & Longitudinal Balance Test**
- **Loop current**
- **Circuit loss**
- **Tracing Tone generator & reference tone**

The instrument is used by Telecom departments including Broadband ISP Service providers & PSTN Telephone networks with twisted pair or coax Copper from the exchange to cabinet, pillar or pole and into the customer premise or business and for Railway signalling and telecom departments for finding faults on a variety of cables, IT departments of Power Discoms and large campus installations managing cable networks.



Ground Resistance Test

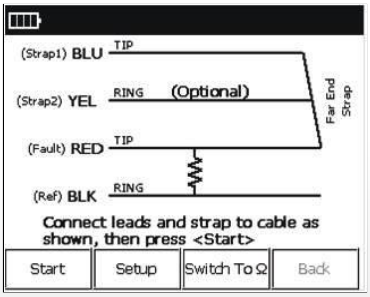
Ground resistance testing is useful when evaluating whether a station, or premise ground is sufficient.



Time Domain Reflectometer (TDR)

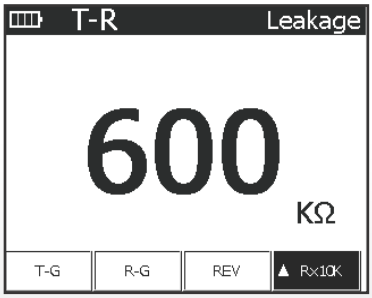
A pulse TDR has the capability of checking the quality of cables from the end of the test leads with zero dead-zone.

- Data storage upto 400 Auto test / 200 TDR traces.
- Transfer Data to PC.



Resistive Fault Locator (RFL)

Resistive Fault Location is used to locate short circuits to other cables or ground.



Leakage / Resistance

Leakage / Resistance is used to detect intermittent resistance faults that normal VOM tests cannot detect.

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Feature	Description	Specification
	Cable Fault Locating	
Fault locating method #1, low resistance **Time Domain Reflectometer (TDR)**	Sidekick's TDR can be used to find a variety of cable faults on metallic cables including • **Cable shorts** • **Open fault** • **Bridged taps/lateral** • **Load coils, splitters** • **Couplers** • **Loop extenders** • **Rough estimate of the total amount of cable that is wet and the approximate location of the wet section.** • **Low insulation faults** If the fault is bad, i.e. shunt faults between: 0Ω-10kΩ , the built in TDR can be used for finding faults on copper cables effective up to 10 km range (depending on Vp). The instrument provides full control of Gain, Vp, Pulse width, averaging & vertical offset as well as zoom facility to investigate areas of interest. A built-in comprehensive cable library is available to calibrate the Sidekick Plus to the correct cable. Apart from Signalling & telecom copper cables, the Sidekick can be used for low voltage cables for locating distance to fault and identifying type of fault. TDR Features include : • **Dual trace function:** Sidekick® Plus test set can display two TDR traces at the same time or perform mathematical comparisons of the traces using the second reference test pair. • **Zoom feature** allows the user to get a closer look at the TDR trace (Zoom In : Data over smaller range), Zoom Out (data over larger range) • **Adjustment** of Gain/Offset/Averages/VP/PW • **Data storage** of TDR Traces with ability to recall saved traces On-site and download to Computer.	Upto 10 kms distance to fault
Fault locating method #2, high resistance **Resistive Fault Locator (RFL)**	RFL feature built in the Sidekick can locate high resistive faults on copper pairs up to 20MΩ. High resistive faults are generally caused by damage or deterioration of cable insulation or sheath protecting the wires due to the presence of water or moisture. This enables telecom cable maintenance groups to be Pro-active in clearing faults before the faults occur.	>60 kms @20MΩ
Data Saving	Traces can be stored on the instrument to be uploaded to PC later. Hundreds of test results can be saved for viewing TDR traces	Upto 400 auto tests or 200 TDR results can be saved.
	Cable Testing & Diagnostics	
Cable Length Measurement	This feature can be used to measure cable length i.e. • measure distance to an open, mutual capacitance as well as the conductor to ground capacitance of the pair. • measure cable length of cable rolls.	Upto or greater than 100 kms
Leakage / Insulation Resistance	Measure insulation resistance up to 1 Giga-Ohm by "leakage test." This tests insulation resistance at 150 DCV which is higher than the normal operating voltages in order to determine the likelihood of a future breakdown in insulation (a high resistance fault) and/or to bring about such an impending failure while the technician is on site and can locate and repair the problem. The leakage test is ideal to locate to detect : • Intermittent resistance faults. • Cable shorts.	999MΩ @150VDC
Earth/Ground Test	Check ground integrity and measure the earth resistance based on fall of potential method.	0 to 250 Ohms
	Multi Meter Function	
AC & DC Voltage	Sidekick Plus can measure all the critical voltage parameters without changing lead configurations. Set the impedance of Sidekick Plus to currently defined Telecom standards of 1 MΩ. The instrument also provides the ability to change this to 100kΩ to conform to older specifications wherever available. Sidekick Plus provides 1MΩ impedance as per telecom standards unlike many other testers which offer 3MΩ which results in invalidated readings. The information can be presented in either: Digital, Analogue or 3 wire format. AC & DC voltage can be presented on the same screen simultaneously.	250VAC 300VDC
AC & DC Loop Current	Current measurement information can be presented in either: Digital, Analogue or 3 wire format. AC & DC voltage can be presented on the same screen simultaneously.	Upto 110mA
Circuit Noise and Power Influence (PI)	The power influence measurement specifically identifies electromagnetic interferences (EMI) from external sources (mainly power lines). Circuit noise on cable pairs is generated internally by pair imbalances or externally by Central Office equipment, subscriber equipment, or electromagnetic interference (EMI) equipment (radio transmitters, generators, transformers, etc.). Normally, a poor ground or sheath on the cable pair or the external equipment allows noise to "leak" onto the cable pair.	30 to 110 dBrnC
Resistance	Low voltage test to measure loop resistance. Circuits being installed too far from the exchange may well test OK but if the loop resistance is too high the higher frequency signals from ADSL & VDSL will not be seen at the far end causing slow modem speeds.	100MΩ

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Technical Specifications :

Parameter	Range	Resolution	Accuracy
TDR Cable fault locating	Upto 10000 meters (Dead zone : 0m)	0.1m	+/- 0.01%+300ps +/Vp uncertainty+/-cursor resolution
AC Volts	0 to 250Vrms	0 to 9.99 V = 0.01 V; 10 to 250 V = 0.1 V	±3%
DC Volts	0 to 300VDC	0 to 9.99 V = 0.01 V; 10 to 300 V = 0.1 V	±3%
Loop Current	110mA	0 to 9.99 mA = 0.01 mA; 10 to 99.9 mA = 0.1 mA; >100 mA = 1 mA	±2 mA
Circuit Noise	0 to 90 dBrnC	250Ω	±2 dBrnC
Earth/Ground Resistance Test	250Ω		Fall of Potential
Longitudinal Balance	+100dB to +20dB	0.1 dB	±2 dB from +20 dB to +90 dB, ±5 dB from +90 dB to +100 dB
Resistance	0 to 100MΩ	0.1 Ω	±3%
Leakage / Insulation	0 to 999MΩ	a. 1 kΩ to 1 MΩ b. 10 kΩ for 1 MΩ to 10 MΩ c. 100 kΩ for 10 MΩ to 100 MΩ d. 1 MΩ for 100 MΩ to 999 MΩ	±5% up to 100 MΩ; ±10%from 100 MΩ to 999 MΩ
Measuring cable length / Distance to Open Meter	0 to 30kms	0.3 m	a. 5% for 30 to 6095 m b. 4% for 6096+ m
Resistive Fault Locating	0 to 61km 0 to 19.99MΩ		±0.5% of full scale, ±1 digit
Tracing Tone Generator	• Tracing tone generator (metallic and common mode) • Reference tone: +14 to –20 dBm; 200 Hz to 20 kHz		
Display	LCD Display, 320 x 240 pixels display resolution, sunlight readable		
Operating /Storage temperature	–18 °C to +50 °C		
Memory	Instrument capable to save Upto 400 auto tests or 200 TDR results.		
Ports	USB - 2nos, RJ45-1nos.		
Dimensions & Weight	279 x 121 x 76 mm , 1.4kG		
Power Supply	Rechargeable Li-ion battery pack, AC adapter/charger (100 to 250 VAC, 50 to 60 Hz, 1 A in, 12 Vdc 2.5 A min. out) , Auto off function		
Supply includes:	Primary test leads (red, green, black) with large crocodile clips, Secondary test leads (blue and yellow), Test strap for the resistive fault locator (RFL) operation, Carrying case		

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