



Simplified Field Test for the Local Loop

CopperMax[®]/OSP

Spirent's CopperMax/OSP field tester offers a single, affordable, yet feature-rich fault-finding device with VF and WB service installation capabilities. Combining multiple copper test techniques into a simple-to-operate, multifunction unit, CopperMax/OSP accelerates circuit evaluation and testing, allowing technicians to identify, locate, and eliminate copper faults more efficiently, reducing Mean Time to Repair (MTTR).

CopperMax/OSP provides these critical features for improving operational efficiency:

- All measurements and test scripts are accessible with just two or three button pushes
- A large graphical display provides quick TDR fault finding, PSD noise and display of measurements
- Consolidation of multiple testers into a single, cost-effective, battery-powered unit
- Wireless remote access to laptops and network systems offers immediate test verification and documentation
- Integration with Spirent's REACT[®] remote test operations support system (OSS), Taskforce intelligent field management system, and other Spirent test probes to help eliminate time-consuming, double-ended "meet me" testing

Comprehensive copper fault analysis

CopperMax/OSP's DVOM features allow technicians to easily identify AC and DC faults using a large screen to display results and simplified help menus. Other test abilities include a



complete suite of voltage, current, opens, resistance, and balance tests for identifying faults. Once a fault is identified, testers can use CopperMax/OSP's precision long-range TDR to find those faults with a single button push. High resistive faults can also be found easily due to the unit's superior RFL feature.

Prequalification & troubleshooting of DSL services

To pre-qualify loops for the deployment of DSL services, qualitative testing and impairment diagnosis is supported. The CopperMax/OSP can locate a wide variety of service effecting faults, using noise, wideband loss, and DVOM measurements. The unit also supports graphical wide band Power Spectral Density (PSD) testing for identifying adjacent noise disturbers in a binder.

Installation of Voice services

CopperMax/OSP features drawing dial-tone, C-Message noise, VF loss, and DVOM tests for helping field technicians ensure voice service after copper pair conditioning. The unit also stores critical test numbers such as quiet termination, milliwatt, and "drop battery" for ease of use.

Wireless integration with laptops & network systems

CopperMax/OSP communicates easily through standard wireless and serial links. When enabled with an optional remote GUI software package, CopperMax/OSP can be remotely controlled from up to 300 ft away. Testers can use this same link to instantly export results for test verification or historical analysis.

In the Americas:

15200 Omega Drive
Rockville, MD USA
20850-3240
Tel: +1 301.590.3600
Fax: +1 301.590.3698
www.spirentcom.com

In Europe, Middle East, Africa, & Asia Pacific:

Hamilton International
Technology Park
High Blantyre
Glasgow, G72 0FF
Scotland, U.K.
Tel: +44 (0)1698 723400
Fax: +44 (0)1698 723401



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CopperMax/OSP integration with REACT & CopperMax®/RT

Integrating CopperMax/OSP with our REACT OSS and CopperMax/RT remote test probe creates an exceptionally versatile solution for maximizing many of the most important factors related to operational efficiency, including:

1. Technician use of defined Methods and Procedures (M&Ps), thanks to simple push-button macros
2. Elimination of time consuming double-ended (two technician) testing
3. Elimination of false field dispatches for failures that can be resolved within the CO/SE

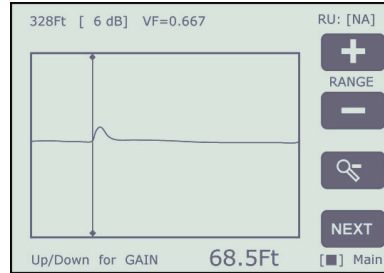
This unified solution lets a single field technician resolve and close a work order, eliminate time consumed waiting for a central office technicians and unnecessary referrals to other technicians, resulting in decreased MTR and repeat rates.

Primary Analysis Features

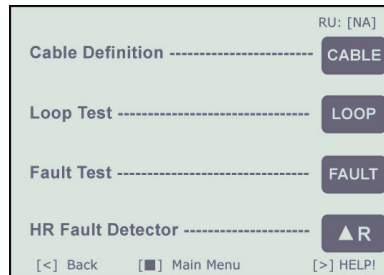
Multimeter (DVOM)—Allows fast measurement of voltage, current, resistance, and capacitance (e.g., opens), loop length, current, and battery voltage. It also identifies faults such as opens, shorts, battery crosses, and bad splices.



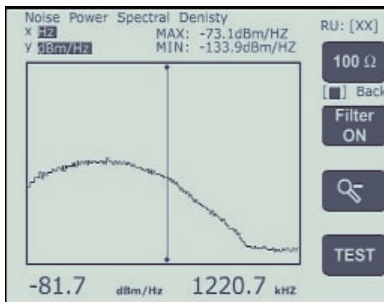
TDR—This extremely high precision feature helps testers spend less time trying to locate faults. This feature finds load coils, bridged taps, and faults with ease, with fault isolation out to 25,000 ft without having to remove the central office battery.



Resistive Fault Locator (RFL)—For high resistance faults undetectable using a TDR, RFL analysis allows the tester to measure loop and insulation resistance, and accurately locate ground and battery faults with the touch of a button.



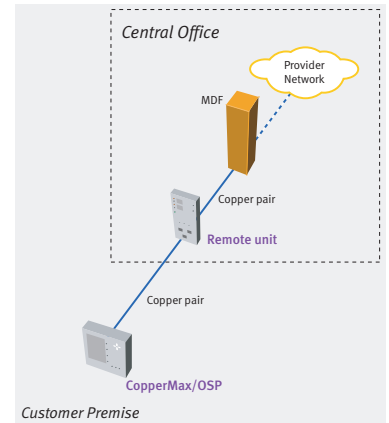
WB TMS and Power Spectral Density—This feature measures WB Tones up to 2.5MHz for comprehensive loss characterization. An additional Power Spectral Density feature lets the



tester identify noise disturbers such as HDSL and T1. The unit's graphical and numerical analysis of wideband noise helps the tester quickly isolate and resolve troubles associated with intermittent modem sync and/or bit rate speeds.

In-band Controllable Remote Unit

This optional unit helps you maximize field analysis of wide band loss and longitudinal balance by allowing remote configuration of this unit via the line under test. This unit can also send out a tracer tone for finding difficult to locate pairs within a bundle or count, or to provide a "strap" for RFL analysis. Once the trouble is fixed, the field technician can remotely configure it into through-mode, immediately placing the customer back in service. With this unit present on the test pair, the provider can help avoid time lost waiting for other technicians to complete the job.



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