TEMPO®
COMMUNICATIONS

SMART OPTICAL LOSS TEST SETS
525 SERIES

TempoCom.com

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525 PRODUCT FAMILY
SMART CABLE ACCEPTANCE TESTING

The 525 family is a rugged and dependable line of smart cable acceptance testing instruments designed for telecom and datacom high count cable acceptance testing. The 525 delivers link losstesting the smarter way, creating the easiest means for testing fiber optic cable in the field.

- Automated bi-directional testing
- Optical return loss measurements
- Dual wavelength insertion loss measurements
- Multi-mode and Single-mode models user settable PASS/FAIL thresholds
- Communications between units via messaging
- Wide dynamic range optical power meter
- Test record storage and data management software
- Rugged outside plant instrument package

The 525 Product Family

- 525N-30
  850/1300nm Automated Insertion Loss - PC Connectors
- 525N-60
  1310/1550nm Automated Insertion Loss - PC Connectors

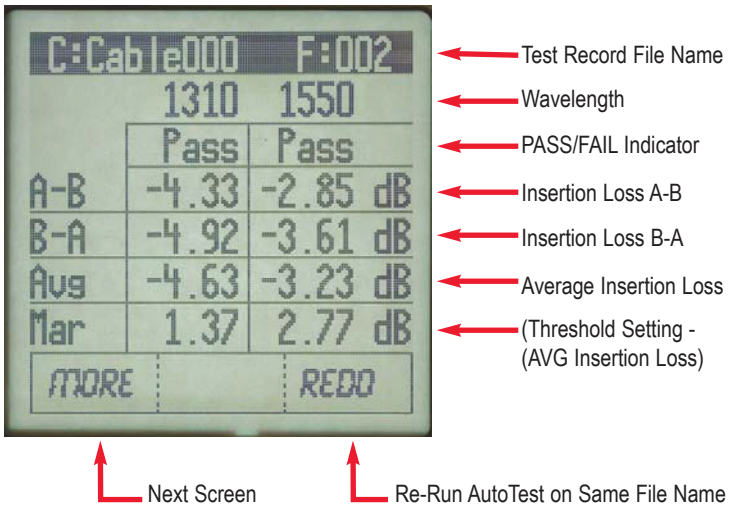
The 525 family of products provides an accurate, fast and easy to use method to measure insertion and return loss on multi-mode and single-mode fiber optic cables. And, the one button AUTOTEST ensures the user is guided through the measurement to obtain dual wavelength (850/1300nm or 1310/1550nm) bi-directional insertion loss measurements. Plus, the 525 single-mode family of products has a return loss measurement mode.

With a rugged and conveniently sized design, the 525 maybe used in the demanding and severe environment of the outside plant. The large backlit display and sealed membrane panel allows for use in the harshest of locations. The 525 can store up to 1500 measurement records to be downloaded to a database manager that can then organize and print certification reports.

Internal rechargeable batteries power the 525. When fully charged, the 525 provide 8 hours of continuous operation.

Automated Insertion Loss Measurement

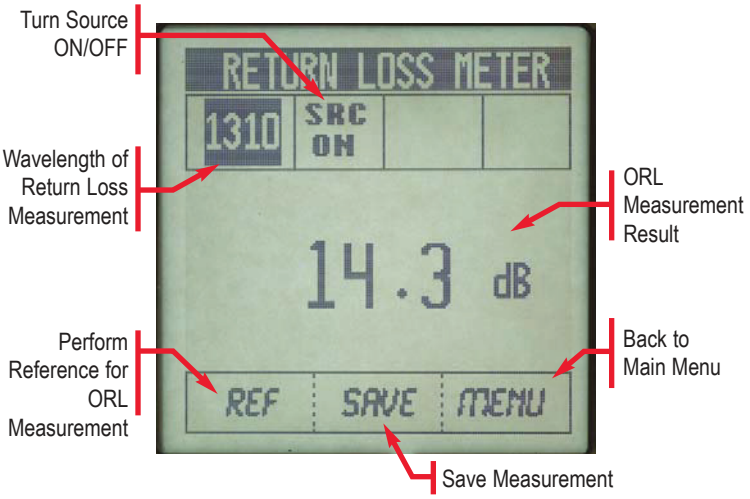
The AutoTest button executes a bi-directional insertion loss test and displays an event table of measurement results in a matter of seconds. It informs the user of the PASS/FAIL condition of fibers tested based on user-set thresholds, and then automatically assigns a fiber ID and saves the test record to internal memory. This simple process helps to ultimately lower the cost of automated cable acceptance testing.



Optical Return Loss Measurement

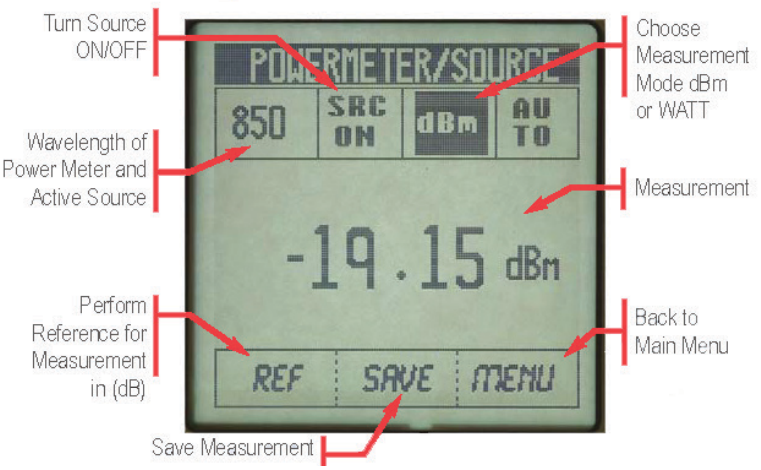
A return loss measurement characterizes the strength of reflections produced by variations in the refractive index along a fiber link, known as back reflection or Fresnel reflection. Quantified in decibel (dB) units, return loss is a logarithmic expression of the ratio of reflected power over the incident power. That is, the intensity of light reflected back to the return loss meter over the intensity of light injected into the fiber, expressed as a positive number.

A common source of back reflections is the junction where two fiber optic connectors are mated. Because of this, a connector with a high return loss, which sends very weak reflections back to the transmitter, is superior to a connector with a high return loss that sends back strong reflections. When measuring connectors, extremely low return loss values indicate a defect, such as core misalignment, poor fiber end face contact, scratches, breaks, or end face contamination.



Optical Power Meter

The 525 incorporates an optical power meter calibrated at 850, 1300, 1310, 1550nm with a dynamic measurement range of +10dBm to -70dBm. The optical power meter interface utilizes the Tempo snap-on-connectors (SOC) enabling the user to configure the power meter for all industry standard optical connector interfaces.



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SMART CABLE ACCEPTANCE TESTING
AS EASY AS 1...2...3...

Step 1: Instrument Set-up

- **Set-up Script requires 3 settings**

User has the ability to select 1310, 1550nm or 1310 and 1550nm testing.

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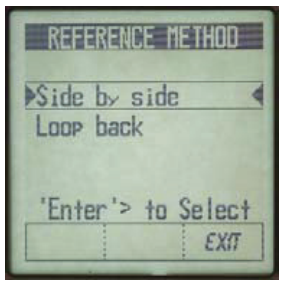
Step 2: Referencing

- **User selects reference method**



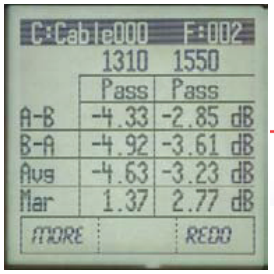
Side by side reference is selected when both units are together and referencing can be accomplished. This method is more accurate due to cross calibration of units.

Loop back referencing method is chosen when the units are separated and it is not convenient to co-locate instruments.

Step 3: Running AutoTest

Instrument automatically assigns file name. User may select base name in start # and increment amount.

All instructions for running AutoTest given.



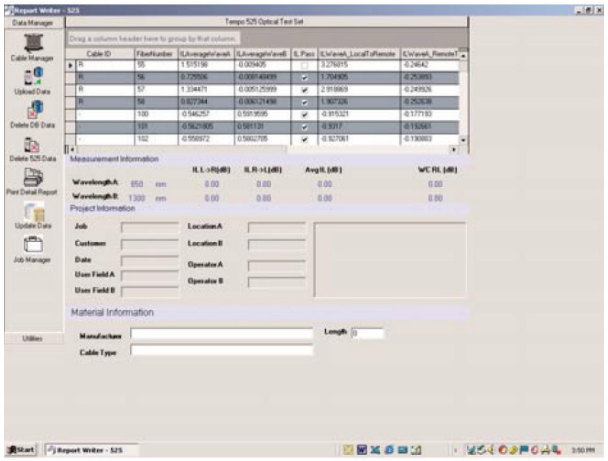
Instrument displays PASS/FAIL and detailed test results.

User can perform as many AutoTests as required to test entire cable. Instrument will return to the AutoTest Start screen and increment fiber count automatically. All test records are automatically saved.

DOCUMENTING ACCEPTANCE TESTS

Downloading Tests to Report Writer™

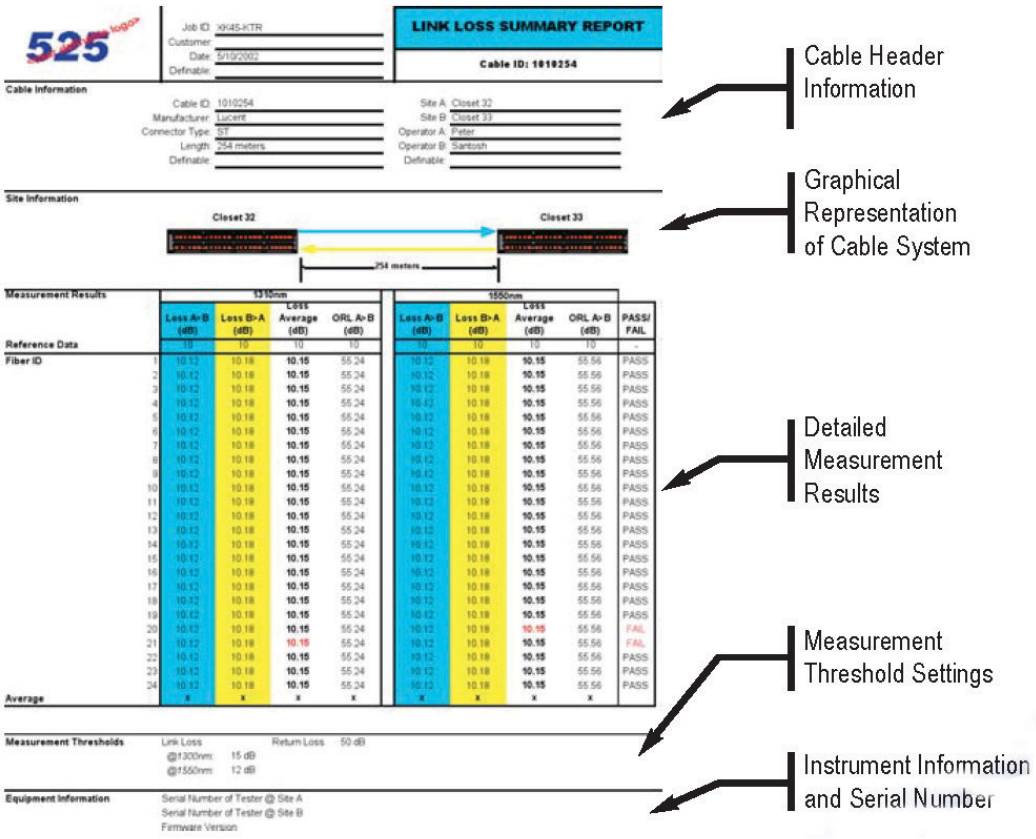
Download Test Records to Report WriterTM Software via RS-232 port on instrument.



- Report WriterTM is a database to manage your measurement records.
- Generate detailed single fiber reports.
- Generate entire cable reports detailing all fiber measurements contained within a cable.

REPORT WRITERTM CABLE ACCEPTANCE REPORT

The 525 Report Writer™ is a database that manages measurement records. It details single fiber reports, and can also generate entire cable reports detailing all fiber measurements contained within a cable. The efficient Report Writer™ splits the report into four sections: Customer Information, Cable Information, Site Information, and Measurement Results. The user can also place customized graphics in the upper right corner.



SPECIFICATIONS:	525N-30	525N-60
Instrument Type	Multimode Smart Loss Test Set	Singlemode Smart Loss Test Set
Interface Connector	PC Connector Interface	PC Connector Interface
AUTOTEST measurements	AUTOTEST performs Insertion Loss Test	AUTOTEST performs Insertion Loss Test and Manual Return Loss
Power Meter Specifications		
Detector Type	InGaAs	InGaAs
Display Range	+10dBm to 70dBm	+10dBm to 70dBm
Calibrated Wavelengths	850, 980, 1300, 1310, 1550, 1480, 1625	850, 980, 1300, 1310, 1550, 1480, 1625
Absolute Accuracy	±0.25dB	±0.25dB
Resolution	0.01dB	0.01dB
Measurement Units	dBm, dB, W	dBm, dB, W
Connector Type	UCI-UPC flat polish adapter 62.5/125	UCI-UPC flat polish adapter 9/125
Source Specifications		
Center Wavelength	850nm ±30nm, 1300nm ±30nm	1310nm ±30nm, 1550nm ±30nm
Spectral Width	<170nm	<5nm
Output Power	>-21 dBm	>-10 dBm
Output Stability	±0.10dB/ 8 hours	±0.15dB/ 8 hours
Coupled Power Ratio (CPR)	25dB to 29dB ±1dB, 21dB to 22dB ±1dB	n/a
HOMP	0.30dB to 0.80dB	n/a
Autotest Insertion Loss Specifications		
Test Port Measurement Range	25dB	40dB
Calibrated Wavelengths	850, 1300nm	1310, 1550nm
Return Loss Specifications		
Measurement Range	n/a	10dB to 45dB
Accuracy	n/a	0.5dB
General Descriptions		
Display Type	Graphics Liquid Crystal with Backlight	Graphics Liquid Crystal with Backlight
Fiber Type	Multimode 62.5/125 um	Singlemode 9/125 um
Standard Connector Type	FC, SC, ST	FC, SC, ST
Laser Classification	Class 1 CFR 1040	Class 1 CFR 1040
Operating Temperature	0°C to +50°C	0°C to +50°C
Storage Temperature	-20°C to +60°C	-20°C to +60°C
Relative Humidity	0 to 95% RH non-condensing	0 to 95% RH non-condensing
Size	7.600" X 4.300" X 2.300" (19.3cm X 10.9cm X 5.8cm)	7.600" X 4.300" X 2.300" (19.3cm X 10.9cm X 5.8cm)
Weight	2.2 lbs (1.0kg)	2.2 lbs (1.0kg)
Power	Internal rechargeable NiMH	Internal rechargeable NiMH
Battery Life	>8 hours	>8 hours

ORDERING INFORMATION

The 525 is a Smart Optical Loss Test Set. The user will require two units (one at the near end and one at the far end of the fiber under test) to perform automated optical loss testing. Each kit is configured with all the accessories required to perform testing.

Each Kit includes the following items:

Smart Loss Test Sets

MODEL	DESCRIPTION
525N-30	850/1300nm Smart Optical Loss Test Set - PC Connectors
525N-60	1310/1550nm Smart Optical Loss Test Set - PC Connectors

SOC Adapter Interface

	ACCESSORIES
1020	NTT/FC-PC SNAP-ON CONNECTOR ADAPTER
1030	AT&T/ST-PC SNAP-ON CONNECTOR ADAPTER
1062	NTT/SC-PC SNAP-ON CONNECTOR ADAPTER

UCI Universal Connector Interface

MODEL	DESCRIPTION
APC-108	NTT/FC-PC Universal Connector Adapter
ASC-108	NTT/SC-PC Universal Connector Adapter
ATS-108	AT&T/ST-PC Universal Connector Adapter

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