

Megger

XC-850

Cross Checking Reflectometer



- **Designed specifically for multimode premise datacom fiber and with a Duplex option available.**
- **Quick and easy to set up and use with a range of conveniently packaged patchcords.**
- **Distance resolution $\pm 0.5\text{m}$, minimal deadzone and $>13\text{ dB}$ dynamic range.**
- **Brilliant color display, full keyboard and barcode reader option.**
- **Splash proof, dust proof and rugged.**
- **>10 hour battery life even with display on.**

FEATURES

The XC-850 is a new concept in the evolution of Optical Time-Domain Reflectometers (OTDRs). It has been designed specifically with the requirements of the premise datacom installer in mind. In this environment many of the features associated with complex telecommunication OTDRs are not appropriate and many new features are desirable.

Datacom fiber links are short lengths of fiber installed as part of a Local Area Network (LAN) within a building. Many topologies are used but all require the individual fiber segments to be tested to measure the loss of the fiber and the connectors.

The XC-850 is the OTDR to measure fiber loss and connector loss of the datacom links. It does it automatically and it does it quickly. It stores the results for use later in a report and most importantly will establish the cause and precise location of any faults.

This cannot be achieved using other techniques such as a light source and power meter.

There are normally many individual fibers in a LAN installation especially where fiber to the desktop is used. The XC-850 has many features to aid the measurement and documentation of these installations: Automated link analysis, a full keyboard to annotate cable and fiber identities, a barcode reader option, an automatic duplex cable option and a large capacity storage card for all the results.

The XC-850SST is fitted with a backlit, 100 mm, Color, $\frac{1}{4}$ VGA transmissive display perfect for most indoor environments. The XC-850SSR is fitted with a transreflective display for viewing in bright light conditions

DISPLAY AND DATA HANDLING

The XC-850 is controlled through six "soft" control keys at the side of the screen. Data entry is through a built-in keyboard or barcode reader and the measurement cursors are positioned by a 2-axis controller.

The measurement traces and loss analysis results are stored on a Smart Card (storage card) in Telcordia (Bellcore) GR 196 format and CSV format. They are therefore readable using many proprietary OTDR software packages or Microsoft Office applications.

The XC-850 configuration parameters are stored on the same storage card as the results. These parameters may be specified using the easy-to-use PC Configuration Manager software provided. This enables the XC-850 to be configured off-line: It enables the instrument configuration to be stored with the resultant traces: It enables multiple instruments to be quickly and reliably set to the same configuration.

The configuration software also contains a trace viewing facility to aid report generation.

In addition to the standard simplex instrument, the XC-850DST and XC-850DSR enable duplex fiber links to be measured automatically and the results stored as a single traces with a code that links them as a duplex pair. The traces may be overlaid for comparison.

Power System

The XC-850 is powered by a rechargeable battery that provides for a 10 hour working shift even with the display backlight on. Recharging is through an external charger/power supply that enables the XC-850 to continue working while charging.

SPECIFICATION SUMMARY

Wavelength	850 nm +0/-30 nm (Loss calibrated to 850 nm)
Pulse width	4 nanosecond (0.4 meter)
Fiber types	62.5 μm or 50 μm multimode graded index
Maximum Fiber Length	2 km
Resolution	Non saturating Fresnel events less than 1m apart (+/-0.5 meter location accuracy)
Dynamic Range	>13 dB of fiber loss (256 k averages where S/N = 1)
Group Index	User-adjustable between 1.2 – 2.5
Event Dead-zone	1.5 m using Telcordia specified test method. 3 to 4 m at standard launch energy (full power) using typical connectors.
Attenuation Dead-zone	<4 m.

(As with all OTDRs, dead zone parameters are very dependent on the event reflectance. The Telcordia definition is used.)

Mechanical	
Front panel	135 x 240 mm (5 1/2" x 8 1/2")
Depth	245 mm (9 3/4")
Weight	5.15 kg (11.3 lbs)
IP Rating	IP43

Mode Conditioning Patchcords

The importance of using the correct patch cord for OTDR measurements optical fiber links cannot be overstated. Patchcords provide intermateability to numerous fiber connector types, in addition the patch cords remove the risk of damage due to multiple insertions away from the instrument connector.

Megger patchcords are compliant with either TIA or IEC requirements for mode conditioning, using appropriate mandrel wraps within the patchcord box. These patchcord enable equilibrium mode distribution (EMD) to be set up prior to the light reaching the fiber under test, providing high quality measurements with the OTDR.

Specification

Fiber length	Nominal 50 meters
External fiber	Nominal 0.5 meters near end
Cord length	Nominal 3.0 meters test end
Standard fiber	62.5 μm or 50 μm type Multimode graded index
Standard connectors	FC, ST, SC

Madrel Wrap

62.5 μm fiber	IEC 5 turns 20 mm TIA 5 turns 20 mm
50 μm fiber	IEC 5 turns 18 mm TIA 5 turns 25 mm

Please refer to Mode Conditioning Patchcord data sheet for full specification and ordering details.

ORDERING INFORMATION	
Item (Qty)	Order No.
850nm Single Fiber (Simplex) Transmissive display	XC-850SST
850nm Single Fiber (Simplex) Reflective display	XC-850SSR
850nm Duplex Fiber Transmissive display	XC-850DST
850nm Duplex Fiber Reflective display	XC-850DSR
Included Accessories	
32MB Smart storage card.	20010-007
Mains battery charger/power supply	6320-241
PC Configuration Manager software	6111-682
User Manual	6172-823
Megger Guide to LAN Fiber Measurement	6172-824
Travel bag (Holds XC-850, multiple patchcord boxes, charger, documentation folders and plenty of other tools.)	6420-142
Optional Accessories	
Mode Conditioning Patchcord Boxes	.
Barcode reader (RS232)	6231-623
Refer to Mode Conditioning Patchcord data sheet for full specifications	