EXFO FOT-922 Specs
Provided by www.AAATesters.com

Automated Loss Test Set

- Fast automated bidirectional loss testing
- FasTesT-compatible
- Optical return loss testing
- Simultaneously talk, test, and locate
- Complete test documentation

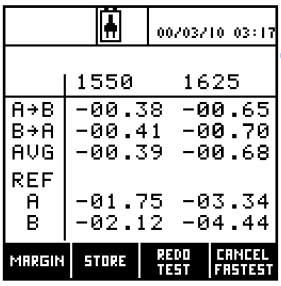
Automated Loss Test Set

Fiber-optic test and measurement equipment

EXFO

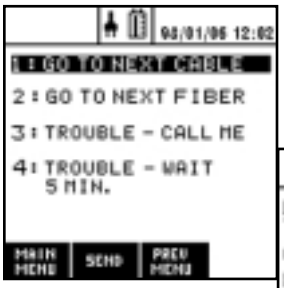
MAXimizing Testing Efficiency

The FOT-920 MaxTester is a compact, portable test tool that stands up to virtually any field environment. It features a splashproof casing, durable shoulder strap, and long battery operating time. The backlit alphanumeric display quickly and easily shows you results and messages under any lighting conditions.



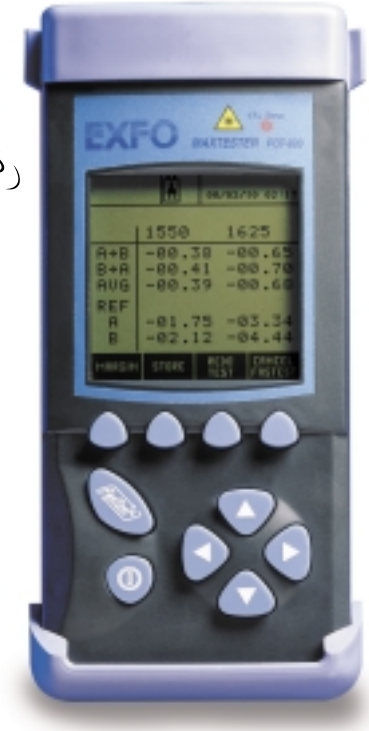
1625 nm testing

With L-band transmission on the rise, testing at 1625 nm is now a must! (Testing at this wavelength provides worst-case attenuation for the L-band.)



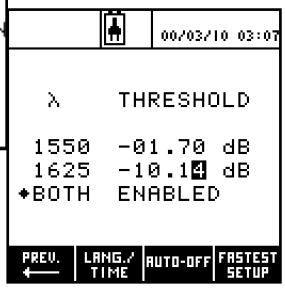
To speed up testing procedures, choose from several pre-programmed messages to send a test partner.

Organize test results using alphanumeric identifiers that directly reflect your cable and fiber identification system.

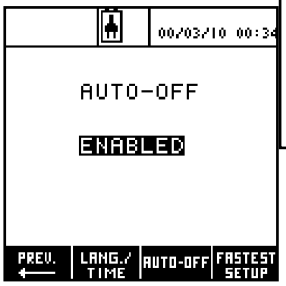


Supports many languages

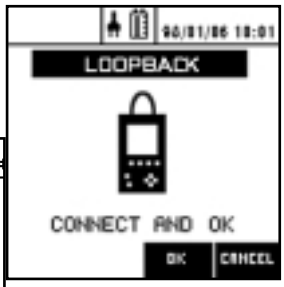
Two languages are installed: English plus your choice of French, Spanish, German, or Czech.



Configure Pass/Fail thresholds for each wavelength. If results exceed thresholds, an alarm and a highlighted value on the screen will inform you.



Save battery operating time. The auto-off function shuts the unit down after 15 minutes of inactivity.



Set up your references from different sites by using the loopback reference method.

FOT-920 Equipment Highlights

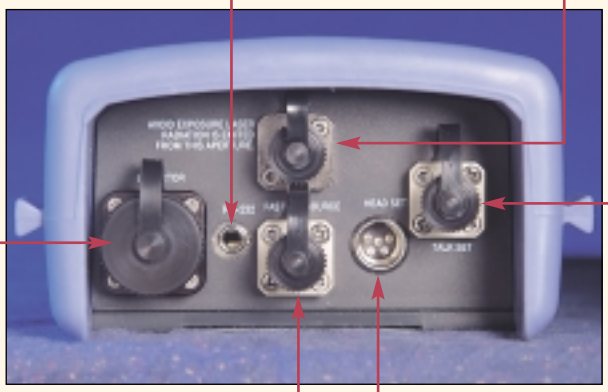
The FOT-920 MaxTester is the result of more than a decade of research and development. We have integrated these six top-of-the-line products into a single powerful unit:

- **Optical loss test set (OLTS)**
- **Power meter**
- **Dual light source**
- **Optical return loss (ORL) test set**
- **Talk set**
- **Visual fault locator**

Detector port
Compatible with almost every connector on the market; perform manual power and loss testing efficiently.

RS-232 interface
Transfer data to a PC or print to a portable printer.

VFL
Built-in 650 nm visual fault location.



Talk set port
For full-duplex voice communication.

FASTEST port
Transmit one or two wavelengths through a single port. Also, use this port to perform ORL measurements, send messages, and use the light source feature.

Headset port
For hands-free talk set operation.

Benefits

Automated bidirectional testing
- Checks bidirectional loss in installed couplers
- Detects network faults
- Checks connector quality at both ends
- Eliminates most operator errors
- Substantially reduces testing time (two directions, two wavelengths, <30 seconds)
- Reduces training time

Dual-wavelength testing
- Detects macrobends
- Detects components such as WDM couplers and wavelength-specific amplifiers
- Simplifies WDM system installations and tune-ups

The All-in-One Unit

Bidirectional, dual-wavelength testing

EXFO understands that your time is valuable; that's why the FOT-920 features the patented FasTesT system. FasTesT automatically measures single-fiber loss in both directions, at two wavelengths, and in less than 30 seconds. To speed up the reporting process, the FOT-920 stores all test results in its non-volatile memory; later, you can file test data according to your own cable identification scheme.

Professional reporting

For more extensive reports, including user and test location information, ToolBox 5 software (included) can be used to download, print, or store results on a computer hard drive.

Talk set communication

Fiber-optic talk sets are very useful for coordinating end-to-end testing between remote sites. The FOT-920 features an optional full-duplex digital talk set for crystal-clear voice transmission. If the talk set cannot be used, the unit can send pre-set or pre-programmed messages via the fiber under test.

Visual fault location

Perform end-to-end identification, or pinpoint breaks, bends, faulty connectors, splices, and other causes of signal loss over a distance of up to 5 km. At the exact fault location, the visual fault locator (VFL) creates a red glow that is visible through most yellow-jacketed fibers.

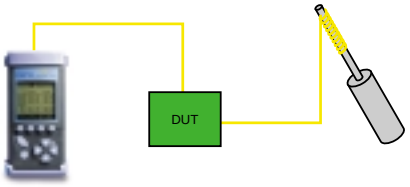
Optical return loss (ORL)

With widespread use of OC-48 and OC-192 transmission systems, bandwidth is essential. Flawless operation of high-data-rate systems depends on measurement and control of a critical parameter known as backreflection or optical return loss. ORL can affect transmissions by

- Destabilizing DFB laser sources
- Interfering with high-frequency analog signals
- Increasing the bit error rate (BER) in high-frequency digital signals

Measuring ORL with the FOT-920 is easy. Here's how:

- Select the ORL menu.
- Coil the fiber around a mandrel right before the device under test (DUT).
- Press the zero reference button.
- Coil the fiber around a mandrel immediately after the DUT and check the FOT-920 display for the measurement.



Wide-Ranging Compatibility

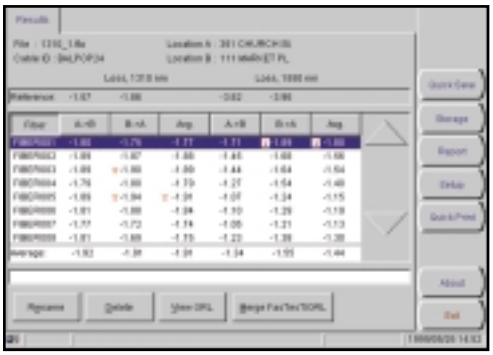
FasTesT, a fast automated dual-wavelength, bidirectional loss test, can be carried out with any two of the following products: FOT-920 MaxTester, loss/return loss automated test set, FTB-3920 MultiTest Module, and FOT-910 Automated Loss Test Set.

You can obtain crystal-clear voice communication using any two of the following products: talk set options of the FOT-920 MaxTester, FTB-1400 and FTB-3920 MultiTest Modules, as well as the VCS-20A Multi-Function Fiber-Optic Talk Set. The FCD-10B Clip-On Device can be clipped onto non-terminated fiber, for communication between two talk sets.

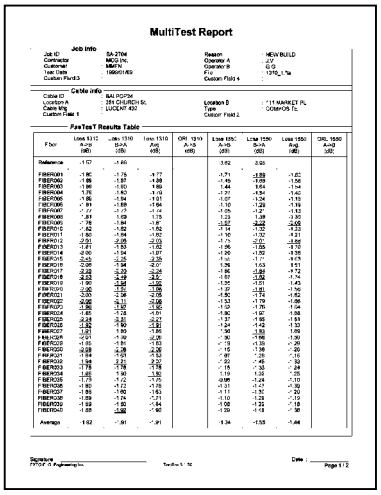
Data Management

With increasing fiber deployment in Telco and CATV networks, busy fiber installation companies sometimes hire subcontractors to perform installation jobs. But subcontractors need to provide test documentation to show that a job meets specifications.

Now, subcontractors who use the FOT-920 can produce quality documentation efficiently. Thanks to the data logging and management features of the FOT-920, users can archive results and download information through the RS-232 port to a PC for analysis and professional report generation.



Our ToolBox 5 software will automatically set up test data in an easy-to-read and well-organized table.



Once the data has been downloaded, it is possible to write up customized, detailed reports to be submitted for the job.

The Complete Test Kit Solution

The FOT-920 MaxTester is part of EXFO's test kit series for all users of test and measurement instruments. These test kits are ideal for singlemode and multimode applications. Test kits offer a competitive measurement range, extreme ruggedness, and several key options, including a high-power detector and an RS-232 interface. All EXFO fiber-optic test kits contain accessories such as cleaning kits, AC adapters, test jumpers, and fiber-optic adapters. Test equipment and accessories are stored in a convenient carrying case.

For more information about our various test kits, please consult EXFO's Fiber-Optic Test Kit brochure.

Key test tools

Fiber-Optic Microscope (FOMS)
Checks the endface of the connector ferrule; available at 200X or 400X magnification.

Visual Fault Locator (FLS-235B series)
Checks system continuity by shining a visible light (635 nm or 670 nm) through connection flaws and cracked cables.

Live Fiber Detector (LFD-100)
Checks for traffic, optical tones, and continuous signals without disrupting communication, and also displays power levels.

Cletop (FCC-02R)
Cleans the endface of connectors.

OC-KIT-100

OC-KIT-100	• FOT-920: high-power germanium detector and return loss option, 1310/1550 nm source, universal adapter • FLS-235B at 670 nm • FOMS microscope 200x • LFD-100 Live Fiber Detector • Cletop connector cleaner
OC-KIT-134	• FOT-920: high-power germanium detector and return loss option, 1550/1625 nm source, universal adapter (optional germanium and InGaAs detector) • FLS-235B series (635 nm or 670 nm) • FOMS series (200x or 400x) • LFD-100 Live Fiber Detector • Cletop connector cleaner
OC-KIT-200	• FOT-920: high-power germanium detector and return loss option, 1310/1550 nm source, talk set, 1310 nm, VFL-XX • FLS-235B at 670 nm • FOMS microscope 400x • LFD-100 Live Fiber Detector • Optional FCD-10B Clip-On Device • Cletop connector cleaner
OC-KIT-400	• Two FOT-920 high-power germanium detectors and return loss option, 1550/1625 nm source, universal adapter (optional talk set and VFL) • Optional talk set and FOMS microscope

SPECIFICATIONS

Power meter[1,2,4]	FOT-922	FOT-922X	FOT-923
Detector type	Ge	GeX	InGaAs
Power range[2] (dBm)	+10 to –68	+21 to –60	+4 to –70
Uncertainty[3,4]	±5%	±5%	±5%
Wavelength range (nm)	780 to 1625	780 to 1625	840 to 1650
Resolution[8] (dB)	0.01	0.01	0.01
Linearity[2,4,8] (dB)	±0.06	±0.06	±0.06

FasTesT/Source/ORL[1]	-12C	-12D	-23B	-23BL	-34BL[9]	-BR23BL	-BR34BL[9]
Emitter type	LED	LED	LED	laser	laser	laser	laser
Wavelengths (nm)	850 ±30/ 1300 ±30	850 ±30/ 1300 ±30	1310 ±25/ 1550 ±25	1310 ±25/ 1550 ±25	1550 ±25/ 1625 ±20	1310 ±25/ 1550 ±25	1550 ±25/ 1625 ±20
Output power (dBm)	>–23/>–19	>–20/>–21	>–25/>–30	>–3.5/>–5.5	>–5.5/>–5.5	>–5/>–6.8	>–7.0/>–7.0
Spectral width[7] (nm)	≤50/≤80	≤50/≤80	≤80/≤80	≤5/≤5	≤5/≤5	≤5/≤5	≤5/≤5
Stability (8 hours)[4] (dB)	±0.15/±0.15	±0.15/±0.15	±0.15/±0.15	±0.1/±0.1	±0.1/±0.1	±0.1/±0.1	±0.1/±0.1
FasTesT range (dB)	41	44	39	60	60	60	60
FasTesT uncertainty[5] (dB)	±0.5/±0.5	±0.5/±0.5	±0.35/±0.5	±0.35/±0.5	±0.35/±0.5	±0.35/±0.5	±0.35/±0.5
ORL range[6] (dB)	—	—	—	—	—	65	65
ORL uncertainty[3,4] (dB)	—	—	—	—	—	±0.4	±0.4

Talk set option[1, 4]	-T02C	-T02BL	-T03BL
Emitter type	LED	laser	laser
Wavelength (nm)	1300	1310	1550
Dynamic range (dB)	30	45	45

VFL option[1, 4]	
Emitter type	laser
Wavelength (nm)	650 ±10
Output power (dBm)	–1

GENERAL SPECIFICATIONS

Size (H x W x D)		22.5 cm x 10.5 cm x 6 cm	8 3/4 in. x 4 1/4 in. x 2 1/4 in.
Weight		1 kg	2.2 lb.
Temperature	operating	–5 to 50°C	23 to 122°F
	storage	–20 to 60°C	–4 to 140°F
Storage capacity		512 fibers	
Relative humidity		0 to 95% non-condensing	
Power		- NiMH battery 8 hours (for light source and talk set) - 9 V battery lasts 2 hours as backup - 6 hours to fully recharge when unit is off	

STANDARD ACCESSORIES

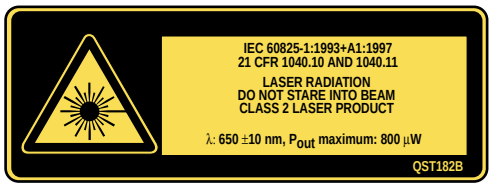
Instruction manual, AC adapter/charger, built-in NiMH batteries, 9 V alkaline battery, shoulder strap, Certificate of Calibration

NOTES

1. All specifications are for a temperature of 23°C/73°F with FC/PC connector unless otherwise specified.
2. At 1310 nm.
3. Uncertainty is function of the resolution and power level detected.
4. After a warm-up time of 20 minutes, followed by an offset nulling for the power meter.
5. When loopback/side-by-side reference is taken.
6. Specification taken at a temperature of 23°C/73°F with FC/APC connector.
7. As defined per Bellcore TR-TSY-000887, rms for lasers and FWHM for LEDs.
8. Resolution and linearity are functions of the power level detected.
9. Also available with 1625 nm laser only. See ordering information.

SAFETY

The emitter types for backreflection, FasTesT, light source, and talk set comply with 21 CFR 1040.10 and 1040.11, and comply with IEC 60825-1:1993+A1:1997.
CLASS 1 LASER PRODUCT
CLASS 1 LED PRODUCT for IEC 60825 only
The VFL option of the FOT-920 is a class 2 laser product. Actual output power level may be lower than specified on label. Refer to “Specifications” for output power and wavelength combinations.



ORDERING INFORMATION

FOT-92X – XXXXXX - XX, (XXXX – XX, XXX – XX) options

Detector code
2 = Ge
2X = GeX
3 = InGaAs

Source code
12C = 850/1300 nm LED (50/125 µm)
12D = 850/1300 nm LED (62.5/125 µm)
23B = 1310/1550 nm LED
04BL = 1625 nm laser
23BL = 1310/1550 nm laser
34BL = 1550/1625 nm laser
BR04BL = 1625 nm laser with ORL option
BR23BL = 1310/1550 laser with ORL option
BR34BL = 1550/1625 laser with ORL option

Source or talk set connector code
50 = FC/PC[1]
54 = SC/PC[1]
58 = FC/APC narrow key
74 = ST/PC[1]
88 = SC/APC
89 = FC/UPC
90 = ST/UPC
91 = SC/UPC
95 = E-2000/PC
96 = E-2000/APC
EI = UPC Universal Interface
EA = APC Universal Interface

Talk set code
T02C = 1300 nm LED (50/125 µm)
T02BL = 1310 nm laser
T03BL = 1550 nm laser

VFL connector code
50 = FC/PC
54 = SC/PC
74 = ST/PC

VFL code
VFL

The fixed baseplate (EI or EA) must be ordered with a removable universal connector adapter. (EUI-XX). Please specify one EUI from the following list:
EUI-28 = DIN 47256
EUI-76 = HMS-10/AG (EI only)
EUI-89 = FC
EUI-90 = ST (EI only)
EUI-91 = SC
EUI-95 = E-2000

Example:
FOT-922-23BL-EI-EUI-89 for FC/UPC interface
FOT-922-BR23BL-EA-EUI-89 for FC/APC interface

NOTES
1. For multimode sources only.

EXFO is certified ISO 9001 and attests to the quality of its products. These products are accompanied by a 12-month warranty and an excellent after-sales support service.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

EXFO has made every effort to ensure that the information contained in this brochure is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics, and products at any time without obligation.

Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

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