MaxTester 715B Last-Mile OTDR

POINT-TO-POINT (P2P) LINKS, LAST-MILE INSTALLATION AND TROUBLESHOOTING

FROST & SULLIVAN
2014 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET LEADERSHIP AWARD

iOLM READY

Stk# 880X412

SPEC SHEET

Fully featured, entry-level, dedicated OTDR with tablet-inspired design perfect for frontline singlemode fiber installers.

KEY FEATURES

- Handy, lightweight, powerful, tablet-inspired design
- 7-inch, outdoor-enhanced touchscreen – the biggest in the handheld industry
- 12-hour autonomy
- Dead zones: EDZ 1 m, ADZ 4 m
- Dynamic range of 30/28/28 dB
- Rugged design built for outside plant
- iOLM-ready: intelligent and dynamic application that turns complex OTDR trace analysis into a one-touch task

APPLICATIONS

- FTTx last-mile installation and troubleshooting
- Short access-network testing
- FTTA fiber-DAS installations
- CATV/HFC network testing

COMPLEMENTARY PRODUCTS AND OPTIONS

Fiber inspection Probe
FIP-400B

FastReporter 2
EFFICIENT POST-PROCESSING SOFTWARE

Data Post-Processing Software
FastReporter 2

Soft Pulse Suppressor Bag
SPSB

EXFO

THE HANDHELD OTDR... REINVENTED.

The MAX-700B series is the first tablet-inspired OTDR line that is handy, lightweight and rugged enough for any outside plant environment. With a 7-inch, outdoor-enhanced touchscreen–the most efficient handheld display in the industry–it delivers an unprecedented user experience. Its intuitive Windows-like GUI ensures a fast learning curve. Plus, its new and improved OTDR2.0 environment offers icon-based functions, instant boot-up, automatic macrobend finders as well as improved auto and real-time modes.

The Max-700B series is a line of genuine high-performance OTDRs from the world's leading manufacturer. It delivers EXFO's tried and true OTDR quality and accuracy along with the best optical performance for right-first-time results, every time.

The amazing 12-hour battery life will never let a technician down, and the plug-and-play hardware options, like the VFL, power meter and USB tools, make every technician's job easier.

Most importantly, the Max-700B series is finally bringing the iOLM, an intelligent OTDR-based application, to the handheld market. This advanced software turns even the most complex trace analysis into a simple, one-touch task.

Ultimately, the Max-700B series is small enough to fit in your hand and big enough to fit all your needs!

THE ENTRY-LEVEL SOLUTION DESIGNED FOR ALL YOUR TESTING NEEDS

The MAX-715B OTDR/iOLM is optimized for the point-to-point testing and troubleshooting of FTTx architectures, and is ideal for testing short fibers (e.g., inside a CO environment or at FTTA/DAS network installations).

Other models available :

› MAX-720B Access for any short network construction (36 dB)

› MAX-730B FTTH/PON installation and maintenance for testing through optical splitters and P2P metro (39 dB)

REMOVING THE COMPLEXITY FROM THE OTDR

iOLM | intelligent Optical Link Mapper

Launch multiple OTDR acquisitions

↓

Analyze the traces

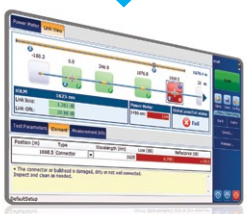
↓

Compound the results

↓

Display a schematic link view and prompt diagnosis

↓



US patent 6,612,750

Using a unique and patented automated multipulse and multi-wavelength acquisition approach, the field-proven iOLM surpasses the traditional OTDR and linear view for expert-level link characterization of any fiber network.

This dynamic OTDR-based application uses EXFO's most advanced algorithms to deliver detailed information and maximum resolution on every element of the link. Thanks to its unmatched intelligence and simplicity, the iOLM converts complex OTDR tests into clear and accurate go/no-go results, through a single button operation.

› Hardware optimized and intelligent software for maximum performance

› Multiple acquisitions, multiple wavelengths with one button–all automated

› Expert-level characterization results in a single, comprehensive report

› The fastest and hassle-free way to perform full fiber characterization

› No training required: self-setting device with clear go/no-go results

› Minimized truck rolls, thanks to the smartest analysis, powered by Link-Aware™ technology

Powered by Link-Aware™ TECHNOLOGY

Three ways to benefit from the iOLM:

OTDR combo (Oi code)	Upgrade	iOLM only
Run iOLM and OTDR applications on one unit	Add iOLM software option, even while in the field	Order a unit with the iOLM application only

OPTICAL PLUG AND PLAY OPTIONS:

The MaxTester features plug-and-play optical options that can be purchased whenever you need them, at the time of your order or later on. In either case, installation is a snap you can do it by your own, without any software update required.

OPTICAL POWER METER

A high-level power meter (GeX) that can measure up to 27 dBm, the highest in the industry. This is essential for HFC networks or high-power signals. If used with an auto-lambda/auto-switching compatible light source, the power meter automatically syncs on the same wavelength avoiding any risk of mismatched measurement.

› Extensive range of connectors

› Auto-Lambda and Auto-Switching

› Offers measurement storage and reporting

› Seven standard calibrated wavelengths

VISUAL FAULT LOCATOR (VFL)

The plug-and-play VFL easily identifies breaks, bends, faulty connectors and splices, in addition to other causes of signal loss. This basic, yet essential troubleshooting tool, should be part of every field technician's toolbox. Visually locating faults by creating a bright-red glow at the exact location of the fault on singlemode or multimode fibers, it can detect faults over distances of up to 5 km. (Available with the Optical Power Meter only)

FIBER CONNECTOR INSPECTION AND CERTIFICATION - THE ESSENTIAL FIRST STEP

Taking the time to properly inspect a fiber-optic cable can prevent a slew of problems down the line–saving you time, money and headaches.

FIP-430B | The First Fully Automated Fiber Inspection Probe for the Field

Housing a unique automatic focus adjustment system, the FIP-430B automates each operation in the connector endface inspection sequence, transforming this critical process into one quick and easy step, which can be performed by technicians of all skill levels.

100% Automated [a] | **1-step** process [a] | **57%** shorter test time [b]

3 Models to fit your budget:

FEATURES	Basic FIP-410B	Semi-Automated FIP-420B	Fully-Automated FIP-430B
Three magnification levels	√	√	√
Image capture	√	√	√
Five-megapixel CMOS capturing device	√	√	√
Automatic fiber image-centering function	X	√	√
Automatic focus function	X	X	√
On-board pass/fail analysis	X	√	√
Pass/fail LED indicator	X	√	√

Read the FIP-400B specification sheet or visit www.EXFO.com/keepthefocus for more information.

Notes

a. Model FIP-430B only

b. Data sourced from EXFO's case study, with calculation based on typical analysis time.

SOFTWARE UTILITIES

Software update	Ensure that your MaxTester is up-to-date with the latest software.
VNC configuration	The Virtual Network Computing utility allows technicians to easily remote control the unit via a computer or laptop.
Microsoft Internet Explorer	Access the Web directly from your device interface.
Data mover	Transfer all your daily test results quickly and easily.
Centralized documentation	Instant access to user guides and other relevant documents.
Wallpapers	Enhance your work environment with colorful and scenic backgrounds.
PDF Reader	View your reports in PDF format.
Bluetooth file sharing	Share files between your MaxTester and any Bluetooth-enabled device.
Wi-Fi connection	Upload test results and browse the internet.
Inspection probe	USB probe to inspect and analyze connectors.

PACKAGED FOR EFFICIENCY

1. Singlemode OTDR port
2. In-service testing OTDR port
3. Testing LED indicator
4. Stylus
5. Power meter
6. Visual fault locator
7. 10/100 Mbit/s Ethernet port
8. Two USB 2.0 ports
9. AC adapter
10. Home/switch application and screen capture (hold)
11. Power on/off/stand by
12. Battery LED status
13. Built-in Wi-Fi/Bluetooth
14. Stand support

SPECIFICATIONS [a]

TECHNICAL SPECIFICATIONS	MAXTESTER 715B
Display	7 in (178 mm) outdoor-enhanced touchscreen, 800 x 480 TFT
Interfaces	Two USB 2.0 ports RJ-45 LAN 10/100 Mbit/s
Storage	2 GB internal memory (20 000 OTDR traces, typical)
Batteries	Rechargeable lithium-polymer battery 12 hours of operation as per Telcordia (Bellcore) TR-NWT-001138
Power supply	Power supply AC/DC adapter, input 100-240 VAC, 50-60 Hz, 9-16 V DCIN 15 Watts minimum
Wavelength (nm) [b]	1310/1550/1625
Dynamic range (dB) [c]	30/28/28
Event dead zone (m) [d]	1
Attenuation dead zone (m) [e]	4
Distance range (km)	0.1 to 160
Pulse width (ns)	5 to 20 000
Linearity (dB/dB)	±0.05
Loss threshold (dB)	0.01
Loss resolution (dB)	0.001
Sampling resolution (m)	0.04 to 5
Sampling points	Up to 256 000
Distance uncertainty (m) [f]	±(0.75 + 0.005 % x distance + sampling resolution)
Measurement time	User-defined (60 min. maximum)
Reflectance accuracy (dB)	±2
Typical real-time refresh (Hz)	3
Laser safety	1M

Notes

a. All specifications valid at 23 °C ± 2 °C with an FC/APC connector, unless otherwise specified.

b. Typical.

c. Typical dynamic range with longest pulse and three-minute averaging at SNR = 1.

d. Typical, for reflectance below –55 dB, using a 5-ns pulse.

e. Typical, for reflectance below –55 dB, using a 5-ns pulse. Attenuation dead zone at 1310 nm is 5 m typical with reflectance below –45 dB.

f. Does not include uncertainty due to fiber index.

GENERAL SPECIFICATIONS

Size (H x W x D)		200 mm x 155 mm x 68 mm (7 7/8 in x 6 1/8 in x 2 3/4 in)
Weight (with battery)		1.29 kg (2.8 lb)
Temperature	Operating Storage	–10 °C to 50 °C (14 °F to 122 °F) –40 °C to 70 °C (–40 °F to 158 °F) [a]
Relative humidity		0 % to 95 % noncondensing

SOURCE (optional)

Output power (dBm) [b]	–11.5
Modulation	CW, 1 kHz, 2 kHz

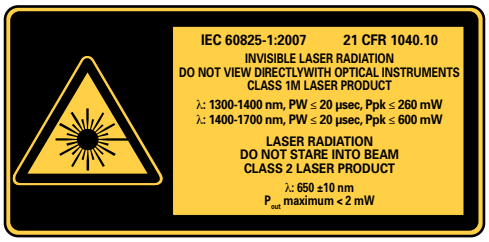
BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional) [c]

Calibrated wavelengths (nm)	850, 1300, 1310, 1490, 1550, 1625, 1650
Power range (dBm) [d]	27 to –50
Uncertainty (%) [e]	±5 % ± 10 nW
Display resolution (dB)	0.01 = max to –40 dBm 0.1 = –40 dBm to –50 dBm
Automatic offset nulling range [d, f]	Max power to –34 dBm
Tone detection (Hz)	270/330/1000/2000

VISUAL FAULT LOCATOR (VFL) (OPTIONAL)

Laser, 650 nm ± 10 nm
CW/Modulate 1 Hz
Typical P_{out} in 62.5/125 µm: > –1.5 dBm (0.7 mW)
Laser safety: Class 2

LASER SAFETY



CAUTION: VIEWING THE LASER OUTPUT WITH CERTAIN OPTICAL INSTRUMENTS (FOR EXAMPLE: EYE LOUPES, MAGNIFIERS AND MICROSCOPES) WITHIN A DISTANCE OF 100 MM MAY POSE AN EYE HAZARD.

ACCESSORIES

GP-10-072	Semi-rigid carrying case	GP-2016	10-foot RJ-45 LAN cable
GP-10-086	Rigid carrying case	GP-2144	USB 16G micro-drive
GP-302	USB mouse	GP-2155	Carry-on size backpack
GP-1008	VFL adapter (2.5 mm to 1.25 mm)	GP-2205	DC vehicle battery-charging adaptor (12 V)
GP-2001	USB keyboard	GP-2207	Stand support

Notes

a. –20 °C to 60 °C (–4 °F to 140 °F) with the battery pack.
b. Typical output power is given at 1550 nm.
c. At 23 °C ± 1 °C, 1550 nm and FC connector. With modules in idle mode. Battery operated after 20-minute warm-up.
d. Typical.
e. At calibration conditions.
f. For ±0.05 dB, from 10 °C to 30 °C.

ORDERING INFORMATION

MAX-715B-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX

Model
M1 = Last-mile OTDR, 1310/1550 nm (9/125 µm)
M2 = Last-mile OTDR, 1310/1550 nm and1625 nm live port (9/125 µm)
M3 = Last-mile OTDR, 1310/1550/1625 nm (9/125 µm)

OTDR software options
OTDR = Enables OTDR application only
iOLM = Enables the iOLM application only
Oi = Enables OTDR and iOLM applications

Connector
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC
EI-connectors = See note below

Connectivity
00 = Without RF components
RF = With RF capability (Wi-Fi and Bluetooth)

Power meter
00 = Without power meter
PM2X = Power meter; GeX detector
VPM2X = VFL and power meter; GeX detector

Software options
00 = Without any software option
SRC = Source through OTDR port

Inspection probe base tips [a]
APC = Includes FIPT-400-U25MA and FIPT-400-SC-APC
UPC = Includes FIPT-400-U25M and FIPT-400-FC-SC

Inspection probe model [b]
FP410B = Digital video inspection probe
Triple magnification

FP420B = Analysis digital video inspection probe
Automated pass/fail analysis
Triple magnification
Autocentering

FP430B = Automated analysis digital video inspection probe
Automated focus
Automated pass/fail analysis
Triple magnification
Autocentering

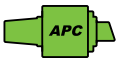
Connector adapter [c]
FOA-12 = Biconic
FOA-14 = NEC D4: PC, SPC, UPC
FOA-16 = SMA/905, SMA-906
FOA-22 = FC/PC, FC/SPC, FC/UPC, FC/APC
FOA-28 = DIN 47256, DIN 47256/APC
FOA-32 = ST: ST/PC, ST/SPC, ST/UPC
FOA-54 = SC: SC/PC, SC/SPC, SC/UPC, SC/APC
FOA-78 = Radiall EC
FOA-96B = E-2000/APC
FOA-98 = LC
FOA-99 = MU

Example: MAX-715B-M1-Oi-EA-EUI-91-RF-VPM2X-FOA-22-FP430B-APC-SRC

Notes

a. Available if inspection probe is seclected.
b. Includes ConnectorMax2 software.
c. Available if power meter is selected.

EI CONNECTORS



To maximize the performance of your OTDR, EXFO recommends using APC connectors. These connectors generate lower reflectance, which is a critical parameter that affects performance, particularly in dead zones. APC connectors provide better performance than UPC connectors, thereby improving testing efficiency.

For best results, APC connectors are mandatory with the iOLM application.

Note: UPC connectors are also available. Simply replace EA-XX by EI-XX in the ordering part number. Additional connectors available are the EI-EUI-76 (UPC/HMS-10/AG) and EI-EUI-90 (UPC/ST).