

# FTB-300

## UNIVERSAL TEST SYSTEM



*The all-in-one solution for all  
your fiber-optic testing needs*

# The All-in-One Solution



**With the rapid evolution** of communication technologies, testing requirements have become more complex and diversified. Fully adapted to this new reality, the FTB-300 Universal Test System (UTS) provides a simple, yet efficient, way to perform multiple advanced test operations in outside plant installation, maintenance, and troubleshooting.

**The unique FTB-300 UTS** combines a series of high-performance test modules in a powerful platform. The test set simultaneously houses up to three field-interchangeable modules. Its PC architecture runs the Windows 95 operating system as well as a complete test application software to provide maximum processing capability right where you need it the most: in the field.

**The power of a UTS** lies in its capability to evolve with technology and your needs; therefore, the FTB-300 UTS provides you with the widest selection of test modules available. From power readings and OTDR testing to optical switching and optical spectrum analysis, the FTB-300 UTS does it all. And the family of plug-and-play modules continues to grow with the continuous introduction of new test modules.

**Welcome** to the FTB-300 UTS, the evolutionary all-in-one solution for your outside plant testing needs.



# Modularity Means Flexibility

## Customized to your needs

The main advantage of the FTB-300 UTS is that the end user can customize it to suit the work environment.

Field-interchangeable modules allow the operator to modify the test tool capabilities in a matter of seconds, and as many times as required in a day's work.

## A sound long-term investment

The open architecture of the FTB-300 UTS provides obvious cost advantages since a single test system is shared between many applications. Without changing the platform, the test set can also be modified with new modules or software upgrades to provide the latest technologies at a fraction of the cost. The FTB-300 UTS really reduces the strain on the test tool budget.



## A rugged, portable field unit

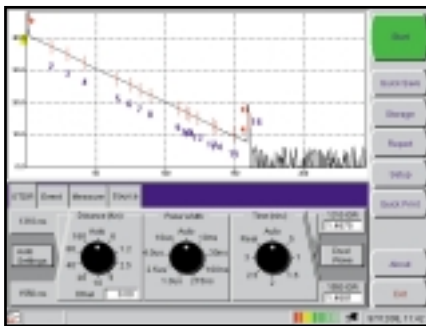
The FTB-300 UTS is designed to resist the rigors of the worst field conditions as well as stand the test of time. The unit offers shock-proof casing to withstand drops and vibrations. The large, sturdy touch-screen is resistant to shock, water, dust, and common chemicals. The outershell is waterproof with sealed joints, and door panels protect connectors, ports, and the floppy disk drive. The FTB-300 UTS also complies to all industry standards.



# Tools of The Trade

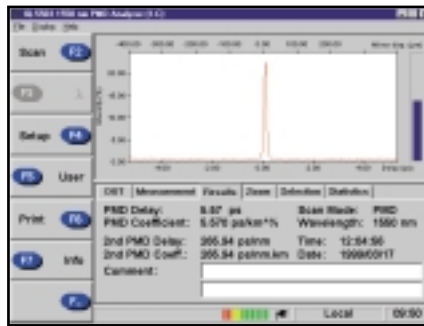
## FTB-7000 Singlemode and Multimode OTDRs

The FTB-300 UTS offers cutting edge OTDR modules to efficiently detect, locate, and analyze fiber splices, connectors, breaks, and other events along a fiber link, as well as a fiber's loss budget. From high-resolution measurements to high dynamic range requirements, the FTB-300 UTS acts as the perfect mini-OTDR.



## FTB-5500 PMD Analyzer

Polarization mode dispersion (PMD) affects system performance and reduces the speed of your network by creating distortion and high error rates. The rugged PMD analyzer module takes a typical measurement in a mere 15 seconds. It is the perfect solution for testing high-speed fiber-optic links in the field.



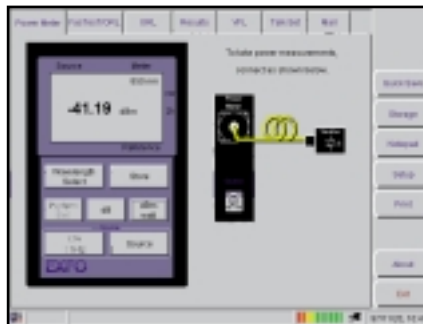
## FTB-9000 Optical Switch

The optical switch module provides highly accurate, repeatable fiber-to-fiber switching between one common port and multiple input/output ports. It multiplies your measurement power and is the perfect tool for testing multifiber cables or several fibers at once. The switch allows automatic OTDR acquisitions on up to 12 fibers, without operator intervention.



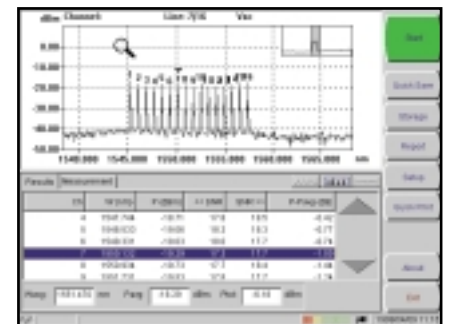
## FTB-5220 Optical Spectrum Analyzer

The technical specifications of the optical spectrum analyzer (OSA) module meet today's most advanced dense WDM system requirements. Specifically built for field use, the OSA features a one-button operation for novice users to quickly and easily perform the right tests and obtain precise, comprehensive test results.



## FTB-1400 and FTB-3920 MultiTest Modules

The MultiTest module lets you add a wide range of test tools and accessories into your FTB-300 UTS. Your customized MultiTest module can integrate the following fiber-optic tools: power meter and light source, FasTest automated loss test set, optical return loss (ORL) test set, visual fault locator (VFL), and digital talk set.



## FTB-5320 Multi-Wavelength Meter

The multi-wavelength meter module detects all the carriers of any dense WDM system and gives you the different channels, wavelengths, and power levels. Designed to provide highly accurate wavelength measurements, it allows the operator to precisely adjust carrier wavelengths and measure the spectral drift of laser transmitters over time for maximized transmitter performance.

And more modules to meet your testing needs.

# A True Multi-Tasking Environment

## Efficient, professional field testing

The FTB-300 UTS puts all the necessary tools in hand for increased productivity. All application software required to operate the different test modules are integrated into a single software: ToolBox 5. This unique user interface gives the operator instant access to all test modules in a true multi-tasking environment, thus increasing test procedure efficiency.

The uniform software presentation for all test modules makes it easy to learn and remember. As these acquired skills apply from one module to another, training costs are significantly reduced and users will not be lost without their manual.

## All the tools at your fingertips

Novices and experts agree that the FTB-300 UTS unique touchscreen provides unsurpassed ease of use. Users no longer find themselves lost in an endless maze of submenus since all functions are activated directly on screen with the touch of a finger.

## Flexible data storage

The FTB-300 UTS standard hard drive provides internal storage capacity for tens of thousands of test results. Data storage options also include an internal floppy disk drive and PCMCIA memory card. A PCMCIA modem card is also available for transferring test data.



## Compatible with handheld test sets

The FTB-300 UTS works hand in hand with existing EXFO handheld instruments such as power meters, sources, and talk sets. Some handheld power meters or loss test sets can even download data to the FTB-300 UTS via a serial link or send messages through the fiber under test. The UTS then becomes an integral player on an efficient fiber-optic test team.



# All the Tools under One Roof

## No emulation software required

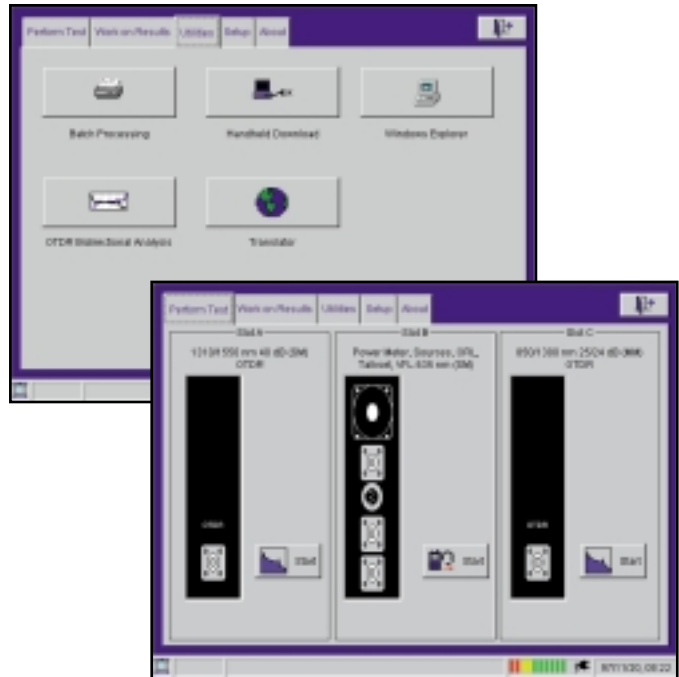
The ToolBox 5 software package has truly earned its reputation as a complete, user-friendly test interface. ToolBox 5, a Windows 95-based application, is installed in every FTB-300 UTS and provides unsurpassed processing and analysis capabilities. ToolBox 5 is easy to upgrade and evolves along with testing requirements.

## Loaded with time-saving features

ToolBox 5 is filled with time-saving features such as quick print, quick save, preview of stored data, cut and paste text input, batch processor, etc.; therefore, ToolBox 5 generates significant cost savings by simplifying your work and increasing productivity.

## Office version of ToolBox 5

ToolBox Office is designed to perform extensive analysis of test results on a desktop computer in an office environment. ToolBox Office is especially useful when extensive post-processing of test results must be performed in the office environment.

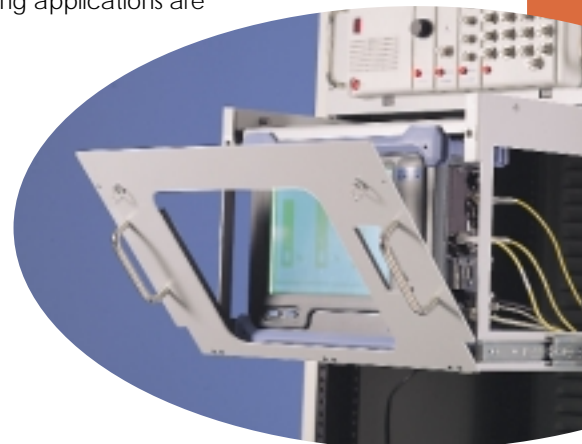
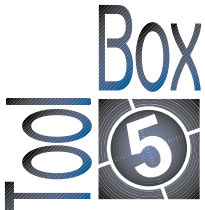


## Remote control capability

An FTB-300 UTS installed in the field or in a central office can be remotely accessed from another FTB-300 or from your desktop PC with ease to adjust test parameters, perform tests, and download results.

## A rack-mounted FTB-300 UTS that is ready to go

A rack-mount kit is available for central office environment installation of the FTB-300 UTS. The rack-mounted FTB-300 UTS can quickly be removed from the rack when special field testing applications are to be performed.



# Built-in Field Intelligence

## Processing power in the field

The FTB-300 UTS relies on PC-based processing and a complete test application software to make your data acquisition more productive.

This processing power lets you perform on location the most complex test operations, as well as data analysis, documentation, and archiving with the test set.

## The only test set that doubles as a PC

The PC-based FTB-300 UTS operates on Windows 95 and runs almost any off-the-shelf Windows and DOS software; therefore, you can enhance the functionality of the test set by loading any software required to do the job. The FTB-300 UTS also supports external peripherals such as a printer, VGA monitor, keyboard, and mouse. Hence, the Universal Test System can even replace a portable PC.

## Print traces and reports at all times

The report generator enables the production of professional test reports directly from the FTB-300 UTS. With the unique touchscreen keyboard, you can document test results in the harshest field conditions. Printouts can be customized to include traces and graphs, tables of results, comment notepads, test parameters, and more. Both fiber and cable reports can be generated. Reports can either be printed individually or in a batch to save time. The trace preview window aids file selection before printing.



## Unique test applications

Hardware and software combine forces in the FTB-300 UTS such that unique tests which streamline and automate repetitive or complex operations can be performed.

For example, OTDR or loss testing on hundreds of ribbonized fibers can be significantly accelerated with the use of the 1x12 optical switch and OTDR modules. Such large amounts of data can then be handled through advanced software tools, such as the batch processor and cable report generator, which allow you to complete the task in a fraction of the time usually required.



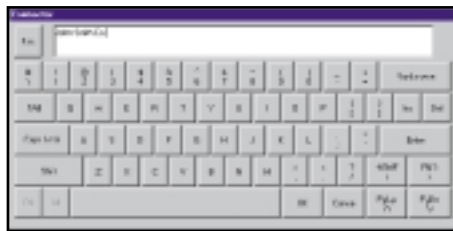
# Professional Data Management



Report

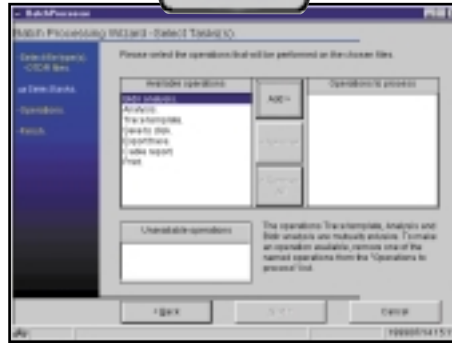


Document your test results completely and quickly.



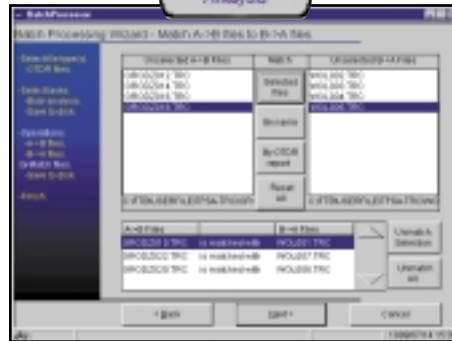
The touchscreen keyboard allows test documentation in the harshest field conditions.

Batch Processor



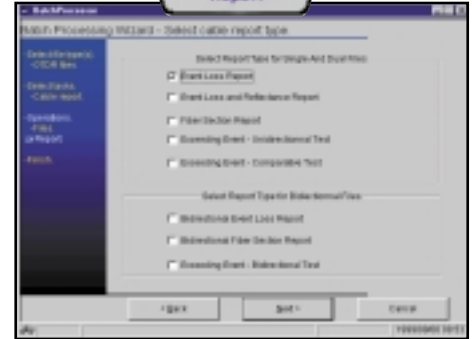
Automatically perform a number of operations on a series of test files, including OTDR analysis, bidirectional processing, templating, and printing.

Bidirectional Analysis



When performing OTDR bidirectional averaging, all acquisitions from both directions of a cable can be matched in one operation, either manually or automatically.

Cable Report



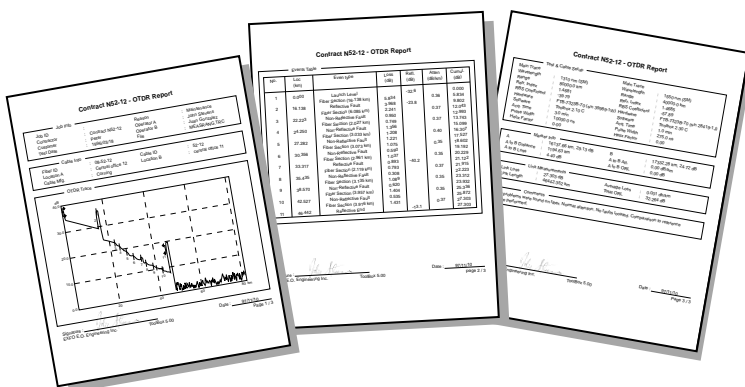
Automatically generate reports with information about all events for all the fibers within a cable, as well as produce pertinent statistical information.

**Cable 23 - Bidirectional Event loss - 1310 nm**

Event	1	2	3	Aver	Total	Max	Event
Type	Att	Att	Att	Att	Att	Att	Att
Dist(m)	1.3	2.2	3.2	3.3	3.5	3.5	3.5
Loss	Avg	Spk	Avg	Spk	Avg	Spk	Avg
Fiber-1	0.10	0.20	0.15	0.20	0.30	0.25	0.20
Fiber-2	0.05	0.12	0.14	0.02	0.08	0.06	0.09
Fiber-3	0.13	0.08	0.20	0.30	0.25	0.30	0.25
Fiber-4	0.04	0.08	0.08	0.05	0.07	0.23	0.17
Fiber-5	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-6	0.18	0.12	0.14	0.02	0.08	0.06	0.09
Fiber-7	0.13	0.08	0.14	0.02	0.08	0.06	0.09
Fiber-8	0.10	0.20	0.15	0.20	0.30	0.25	0.30
Fiber-9	0.20	0.40	0.30	0.30	0.25	0.30	0.25
Fiber-10	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-11	0.04	0.08	0.08	0.05	0.07	0.23	0.17
Fiber-12	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-13	0.13	0.08	0.14	0.02	0.08	0.06	0.09
Fiber-14	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-15	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-16	0.13	0.08	0.14	0.02	0.08	0.06	0.09
Fiber-17	0.08	0.08	0.08	0.05	0.07	0.23	0.17
Fiber-18	0.13	0.08	0.14	0.02	0.08	0.06	0.09
Fiber-19	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-20	0.04	0.08	0.08	0.05	0.07	0.23	0.17
Fiber-21	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-22	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-23	0.04	0.08	0.08	0.05	0.07	0.23	0.17
Fiber-24	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-25	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-26	0.11	0.22	0.18	0.12	0.17	0.21	0.19
Fiber-27	0.11	0.22	0.18	0.12	0.17	0.21	0.19

The Excel-compatible format allows you to create customized reports, use macros, sort data, and generate statistics per cable, project, or contract.

Results can be easily accessed, processed, analyzed, and printed from a desktop PC with ToolBox Office software for maximum efficiency.





# THE FTB-300 Universal Test System

The use of a hard drive and floppy disk drive enables high-capacity data storage and file backup, facilitates documentation tasks, and provides for easy software upgrades.

The PC-based architecture provides the processing power and comprehensive software required for efficient testing in the field.



Shock-absorbing bumpers offer a high degree of protection in the field. The FTB-300 UTS meets all Bellcore drop-test requirements.

All functions are activated quickly and easily by touching the non-capacitive screen.

Sealed components ensure hassle-free testing in any environment.

## ORDERING INFORMATION

### FTB-300-N2-XX-X

#### Option code

- D2 = Active color matrix touchscreen
- M1 = 3.5" floppy disk drive
- W1 = PCMCIA interface
- W2 = PCMCIA interface and 28.8 KBds fax/modem card<sup>2</sup>
- N3 = 4 MB memory upgrade (total of 20 MB)
- N4 = 16 MB memory upgrade (total of 32 MB)

#### Language code

- A = English
- B = Arabic
- C = Chinese (China)
- D = German
- E = Spanish
- F = French
- I = Italian
- J = Japanese
- K = Korean
- N = Norwegian
- P = Portuguese
- R = Russian
- S = Swedish
- V = Chinese (Hong Kong)
- W = Czech

Example: FTB-300-N2-D for German.

If no language is specified, English will be used.

The UTS hosts up to three field-interchangeable test modules.

Rubber seals around and between modules keep out humidity and dust.

PCMCIA drive accepts modem cards, memory card, and more.

All standard interfaces are included to support a printer, modem, mouse, external keyboard, external monitor, etc.



## NOTES

1. When ordering, specify preferred language for default software interface. If documentation in the specified language is not available, English will be used.
2. For North America only.

## STANDARD ACCESSORIES

Instruction manual, ToolBox 5 test application software and manual, 2.1 GB hard disk drive, 16 MB RAM (additional RAM optional), 486 DX4 CPU, monochrome display (active color matrix optional), null modem cable DB9F-DB9F, AC adapter/charger, set of 2 batteries, shoulder strap, semirigid carrying case

## SPECIFICATIONS'

Display	touchscreen, monochrome, 640 x 480 full dot LCD 9.4" touchscreen, active matrix color, 640 x 480 full dot LCD 8.4" (optional)	
Interfaces	serial RS-232	parallel printer
	external VGA monitor	external keyboard (PS/2)
	PCMCIA type II (optional for memory card and fax modem card)	
Storage capacity	internal 2.1 GB hard disk drive (over 100,000 OTDR test files) internal 3.5", 1.44 MB floppy drive (optional)	
Batteries <sup>2</sup>	rechargeable NiMH battery pack (2 batteries) >4 hours of continuous operation as per Bellcore TR-NWT-001138	
Power supply	AC input: 90 V to 250 V, 50/60 Hz	

## GENERAL SPECIFICATIONS

Temperature <sup>3</sup>	operating	-5° to 50°C	23° to 122°F
	storage	-20° to 60°C	-4° to 140°F
Relative humidity	0 to 95% max. non-condensing		
Size (H x W x D)	22.9 x 30.5 x 10.1 cm		9 x 12 x 4 in.
Weight <sup>4</sup>	6.52 kg		14.35 lb.

## NOTES

1. All specifications are for temperature of 23°C/73°F.
2. Standard recharge time is 5 hours. Recharge temperature: 0° to 35°C/32° to 95°F (for full battery recharge).
3. Not including internal 3.5" floppy disk drive, batteries, or PCMCIA card.  
Battery maximum storage temperature: 40°C/104°F.
4. Platform with batteries, no modules included.

## ACCESSORIES

Model	Description
GP-10-009	rigid carrying case (upgrade from soft carrying case)
GP-216	spare null modem cable
GP-217	pentax pocket jet portable printer
GP-218	spare battery set (2)
GP-219	external keyboard (for FTB-300 only)
GP-225	FTB power cable for vehicule cigarette lighter (12 volt)
GP-226	FTB power cable for vehicule battery (12 volt)
GP-257 (A, E, I, S, U)	spare AC external adapter/charger specify: A = North America, E = Europe, I = India, S = Australia and New Zealand, U = United Kingdom
GP-258	external battery charger (uses AC external adapter/charger)

## RACK-MOUNT KIT

RACK1 (1 to 6)	FTB-300 rack-mount kit (without a 48 volt DC adapter/charger)	
RACK2 (1 to 6)	FTB-300 rack-mount kit (with special 48 volt DC adapter/charger)	
Specify (W x D)	1. 48.3 x 30.5 cm	19 x 12 in.
	2. 48.3 x 40.6 cm	19 x 16 in.
	3. 48.3 x 58.4 cm	19 x 23 in.
	4. 60.9 x 30.5 cm	24 x 12 in.
	5. 60.9 x 40.6 cm	24 x 16 in.
	6. 60.9 x 58.4 cm	24 x 23 in.



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