Hands-On

Fiber Optic Advanced Testing w/ FO Refresher

Course Description

This 3-day Hands-On course provides Real-World Experience to testing required for communication fiber optic cabling. This course will also go over a brief Fiber Optic Refresher Module that will cover some Basic Fiber Optics General studies, safety, splicing and more.

The majority of this 3-day course will cover a range of testing requirements set forth by TIA & EIA standards and prepares each student to understand premise (ISP) and outside plant (OSP) fiber optic cable testing. Each student will be actively involved in Hands-On labs to reinforce the course topics.

Students Will Learn

- **Fiber Opics General Studies**
- **Safety**
- **Basic Splicing Techniques**
- **The Proper Set-up, Use and Interpretation of Results using an OTDR (Optical-Time Domain-Reflectometer) on a Fiber Circuit.**
- **Over-all Length of Fiber Circuit Under Test.**
- **Length of Each Segment of Fiber in Circuit.**
- **Acceptable vs. Unacceptable Splice /Connector Loss**
- **dB Loss in Each Segment of Fiber in Circuit.**
- **Effects of Micro Bending on Waveform.**
- **Broken Fiber in Circuit.**
- **Wavelength of Laser Setting.**
- **Pulsewidth of Laser Setting.**
- **Index of Refraction Setting.**
- **Distance Scale Setting.**
- **dB Scale Setting.**
- **And More**

Target Audience

This training is geared towards Field Supervisors and Technicians who need a solid working knowledge of OTDR and power meter fiber optic cable testing procedures used in Premise (ISP) and OSP environments. After completing this course, you will have the ease of mind that you will be able to perform all the necessary functions required for testing fiber optic

cable and Fiber Optic Cable Systems.

Prerequisites

A basic to in-depth understanding of Fiber Optic Technologies. This information
can be obtained in our Courses
- Understanding Fiber Optics 2 days
- Hands-On Fiber Optic ISP/OSP (Splicing, Terminating & Testing Inside & Outside Plant Cabling)

Course Outline

Day 1 - Day 2:

Principle of Communication Fiber Optics
Safety with Fiber Optics
Fiber Optic Cable Types
What are Premise and OSP Testing Standards
Understanding OTDR Testing
Understanding Power Meter Testing
Fiber Optic Cable Loss Factors
Fiber Optic Connector & Adapter Loss Factors
Understanding Insertion & Return Loss
Understanding Communication System Loss Budgets
Bench Top Versus Portable Test Equipment
Understanding an Insertion & Return Loss Test Set
Selecting the Right Test Equipment for your Applications

Day 2 - Day 3:

Preparing the OTDR for Live Fiber Testing
How to use a Launch Cable for OTDR Testing
How to OTDR Test Bare Fiber Cable Before Installation
Setting up a 2-Point and 4-Point OTDR Test
Reading Live Fiber OTDR traces
Identifying OTDR Events
Storing OTDR Traces
Preparing the Power Meter for Testing
Measuring Individual Connector Loss Using the Power Meter
Measuring Overall Cable Loss Using the Power Meter
Continuity Testing and Visual Fault Locating
Testing Documentation and Review

Delivery Method

Instructor led with numerous Hands-On labs and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

3 Days