Hands-On

OSP Tester, Fault Locating & Cable Troubleshooting

Course Description

This 2-day Hands-On course will teach your technicians to operate and fully understand the menus on their testing and fault locating equipment. Students will learn loop parameters needed to provide the many services customers are demanding in todays communications world. There will be in-depth instruction on maintaining the outside plant and how to successfully locate problem areas. This will include resistive and capacitive faults, power influence, and other problems associated with analog and digital transmission.

All loop testing is reinforced with hand-on exercises and can be taken to the field if applicable.

The students will use state-of-the-art test equipment such as the, EXFO-635, HST3000, Viavi ONX-580, Dynatel 965DSP/DSP-AMS, Sidekick Meter, and incorporate any meter(s) that students can bring to the session to use during the hands-on lab procedures throughout the course. Locating buried cables will also be covered and fault simulators will be used during the hands-on lab exercises to reinforce Real-World Experience.

Emphasis will be placed on how to effectively use OSP Test Equipment. Most technicians in the field today only utilize about 30 of this test instruments capabilities our goal is to have a 100 of their test instruments capabilities put to use in the field. No sales pitch in this course, just training! Our SMEs have the field experience to find the answers to real live scenarios, providing students with a Real-World Experience

This course is designed to give the attendees the knowledge of not only how to test with a fault locating meter, but most important, understand what the meter is telling them. All of the explanations of cable and faults are reinforced with Hands-On exercises. This is done with actual cable to give a full understanding of the menus.

Students Will Learn

- **Understand Fault Location**
- **Identify & Locate Faults In Copper "PIC" Outside Plant Cables**
- **Analyze A Faulted Cable Pair**
- **Select The Correct Test Function To Locate The Fault**
- **Locate Resistive, Capacitive & Cross-Battery Faults**

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- **Cable Pair Balance**
- **Wideband Testing**
- **Use Advanced Trouble Analysis**
- **Incorporate Use Of Customer Meters in The Hands-On Labs**
- **Cable Fault Simulators Providing Real-World Scenarios**
- **Loop Parameters**
- **Choose The Proper Test Function**
- **Pinpoint Fault Location**
- **TDR Operation**
- **And More**

Target Audience

Contractors, union craftsman, electricians, technicians, installers, splicers, LAN managers / administrators, end-users, engineers, facilities managers, architects and developers, systems engineers, telecom managers and anyone involved in repairing, installing, maintaining telephone cables.

Prerequisites

A basic understanding of telecommunications this training is available in additional BTS courses.

Course Outline

Module I: Copper OSP Parameters

- Outside cable design
- Shield continuity
- Bonding and grounding
- Resistance
- Capacitance
- Pair twist
- Loop Parameters
- Loop Current
- Loop Loss
- Noise and power influence
- Longitudinal balance
- Protector ground acceptability

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Module II: Copper Pair Testing

- Explanation of test functions
- Terminated tests
- Non-Terminated tests
- Hands-on exercises with meters
- Advantages of multi-pair testing
- FED - Far End Device hookups
- Resistive
- Capacitive

Module III: Resistive Fault Locating

- Resistive fault locate
- Opens locate using the open meter
- Explanation of the TDR
- Locating faults with the TDR

Notes

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Featured Equipment

EXFO-635
JDSU HST3000
3M DynaTel 965 DSP
3M DynaTel 965 DSP/AMS
Viavi OneExpert ONX-580
Viavi Far End Devices (FED)
1155FLS Test Simulators
TuffBooks
Sidekick

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(Other equipment can be incorporated)

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

2 Days

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