

Hands-On

# OSP Tester, Fault Locating & Cable Troubleshooting

w/ I&R refresher



## Course Description

This 3-day Hands-On course is designed to not only give the new hire a good insight of the telephone loop, including installation and troubleshooting, but to answer some of the questions the veteran repair person may have

After completion, this Course has a proven track record to reduce PSC complaints and dramatically decrease the number of repeat trouble tickets.

This Course is 75 Hands-On Labs on our State-of-art Equipment.

The I&R Refresher will cover the practices and specifications of both buried and aerial installations will be presented. Correct bonding and grounding of the install and outside plant cable will include REA guidelines and PSC mandates. These are very important for the safety of the Technician and the Customer. All service standards will be presented and explained.

This course will also train students to identify and locate faults in copper "pic" outside plant cables. Students will analyze a faulted cable pair and select the correct test set to locate the fault. The students will use state-of-the-art test equipment such as the EXFO-635, JDSU-HST3000 / Viavi ONX-580, Dynatel 965 DSP, Sidekick Meter, MTDR 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. Students will learn how to locate resistive, capacitive and cross-battery faults using the multiple OSP test equipment.

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 will be instructed by a nationally known expert in telecom training and is also a factory trained and certified instructor on the EXFO-635, 3M 965 & 2273, Sidekick/Tempo, Sunrise Telecom and JDSU (TTC/Acterna) fault locators.



## Students Will Learn

- **Perform Buried and Aerial installations**
- **Understand Correct Bonding and Grounding**
- **REA Guidelines and PSC Mandates**
- **Understand Fault Location**
- **Identify & Locate Faults in Copper "pic" Outside Plant Cables.**
- **Analyze a Faulted Cable Pair**
- **Select the Correct Test Set to Locate the Fault**
- **Locate Buried Cables**
- **Locate Resistive, Capacitive & Cross-Battery Faults using Multiple Test Sets.**
- **Cable Pair Balance**
- **Understand TDR Operation**
- **Understand Wideband Testing**
- **Use Advanced Trouble Analysis**
- **Use Sheath Fault Locator**
- **Incorporate Their Own Meter throughout the Hands-On Labs.**
- **Use Fault simulators in the Labs, providing Real-World Scenarios.**
- **Be successful with Minimal Supervision**
- **And More**

## Target Audience

Contractors, union craftsman, electricians, technicians, , installers, splicers, facilities managers and technicians, telecom managers and technicians and anyone involved in repairing, installing, maintaining and troubleshooting Telephone Cabling.

## Prerequisites

A basic understanding of Basic Telecommunications. This information can be obtained in our Course(s) below

Hands-On Basic Telephony & TeleCom Electronics

## Course Outline

### Module I. I & R Refresher

Network Interface Devices

Line Protection  
Bonding and Grounding Requirements  
Electrical Safety  
Installing Aerial Drops  
Splicing Buried Service Wire  
Installations at Mobile Homes  
Installing Buried Drops  
Demarcation and Deregulation  
Inside/Outside Wiring Types  
Station Equipment  
Installing Inside/Outside Wiring

## **Module II. Identifying Cable Faults**

Sheath Faults  
Capacitive Faults  
Resistive Faults

## **Module III. Section Analysis**

Cable Pair Analysis Procedure  
Environmental Factors  
Documenting Test Results

## **Module IV. Choosing The Correct Test Set**

Sheath Fault Locator  
Capacitive Bridge  
Resistive Bridge

## **Module VI. Test Equipment Operation**

VOM  
DynaTel 965  
Sidekick Meter  
MTDR

## **Module VII. Locating Buried Cable**

RF and Audio Signals  
Marking The Cable Route

## **Module VIII. Capacitive Fault Lab Procedures**

Opens  
Splits  
Water Ingress

## **Module IX. Resistive Fault Lab Procedures**

Short Locate  
Ground Locate  
Battery-Cross Locate  
Side-Cross Locate

### **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