

PLI-07-023R

COMBO OTDR & FIBRE OPTIC JOINT

ENCLOSURE ASSEMBLY [RIBBON]

# OPTICAL



PERPETUAL LEARNING INSTITUTE provides a comprehensive syllabus that addresses critical practices pertaining to Optical technologies within the Telecommunications Optical access networks

PERPETUAL  
LEARNING  
INSTITUTE is  
a Nationally  
Approved Training  
Provider of  
Telstra™ & nbn™

Contact us today  
for full details



Designed for people with fibre optic knowledge. Each attendee will gain the skills required to confidently build ribbon fibre joint enclosures as used within the nbn™ network. Attendees will also gain skills to confidently test optic fibre links to nbn™ standards and reporting requirements.

Each attendee will construct two nbn™ certified fibre optic joint enclosures. These are chosen to incorporate all the disciplines needed to confidently assemble most joint enclosures available and splice fibre optic cores without causing fault conditions along with OTDR testing skills to complete the nbn™ Workbook.



## BOOK ONLINE

Information is subject to change  
For the most current information and training schedule, please visit : [www.perpetuallearning.com.au/book](http://www.perpetuallearning.com.au/book)



## ACCREDITATIONS

Perpetual Learning Institute Pty.Ltd. is a nationally Registered Training Organisation (RTO code: 40809)

Perpetual Learning Institute Pty. Ltd. is also a Nationally Approved Training Provider (ATP) of nbn™ & Telstra™



APPROVED

## COMBO OTDR & FIBRE OPTIC JOINT ENCLOSURE ASSEMBLY [RIBBON]

### COURSE OUTLINE

#### PLI-07-023R-A

##### Introduction to Fibre Optics

- Understanding FTTP Network Architecture
- Basics of Fibre Optics – Units of Measurement
- Optic Fibre Cable Construction Naming and Colour Codes
- Light Propagation Principles
- Laser Transmission System Theory
- Optical Connectors and Pigtails
- Laser Safety and OH&S
- Fibre Optic Cleaning Principles
- Operating Optical Microscopes / VIPs
- Operating Visual Fault Locators
- nbn™ Network Overview
- Practical Exercises to Reinforce Theory Elements



#### PLI-07-023R-B

##### FTTP (nbn™) Material for Construction Purposes

- Detailed overview of Cables Types
- Detailed overview Splicing Enclosures
- Detailed overview OFDFs
- Detailed overview of FDH
- Detailed overview of Multiports

#### PLI-07-023R-C

##### Fibre Optic Splicing Principles

- Splicing Methods and Technologies
- Splicing Tooling Requirements
- Fibre Optic Cleaning Process for Splicing
- Fibre Optic Cleaving Process for Splicing
- Fusion Splicing Techniques and Acceptable limit of Operation
- Practical Exercises to Reinforce above Elements

#### PLI-07-023R-D

##### Fibre Optic Joint Enclosure Assembly Principles (Select 2 of the following enclosures)

- Assembly Methodologies for W&B HDODF Sub-Rack 72F Ribbon Enclosure
- Assembly Methodologies for Corning Transition ORS Mechanical Closure Ribbon Joint Enclosure

#### PLI-07-023R-E

##### Acquiring a Suitable and Accurate OTDR Trace

- Index of Refraction
- Pulse Width Selection
- Deadzone Effects on an OTDR trace
- Selecting the most Suitable Range and Resolution Setting
- OTDR Trace Acquisition Time
- Wavelength Test Selection
- Practical Exercises to Reinforce above Elements

#### PLI-07-023R-F

##### Evaluating OTDR Trace Elements

- OTDR Trace Basics
- OTDR Trace Elements
- Measuring OTDR Trace Features using an OTDR
- OTDR Fault Conditions – Trace Examples Provided
- Effects of Incorrect OTDR Parameter Setup
- Ghosting and Gainers
- Techniques for Accurate Fault Locating
- Practical Exercises to Reinforce above Elements

#### PLI-07-023R-G

##### Evaluating Overall Link Quality

- Understanding Network Testing Thresholds
- Calculating Loss/Attenuation Budgets
- File Naming Conventions and Trace File Formats/Structure
- Measuring Optical Insertion Loss
- Evaluate an Optical Connector using an Optical Microscope and/or VIP
- Determine the Effectiveness of other Fibre Optic Testing Tools including - VFL, Traffic Identifier etc
- Creating a Professional and Accurate Optic Link Performance Report using the nbn™ Workbook
- Practical Exercises to Reinforce above Elements this relates to multiman
- Practical Exercises to Reinforce above Elements

#### PLI-07-023R-H

##### Course Assessment

- Theoretical Assessment
- Practical Assessment - Complete an Optical Report using Supplied Traces

## COMBO OTDR & FIBRE OPTIC JOINT ENCLOSURE ASSEMBLY [RIBBON]

### INDUSTRY PROBLEM

- With the deployment of the nbn™, Australia now needs additional skilled workers to construct the different network architectures.
- New network architectures and technologies require the development of new skills and knowledge to ensure success.



### PERPETUAL LEARNING SOLUTION

- Working as an nbn™ Approved Training Provider, PERPETUAL LEARNING INSTITUTE has enhanced our traditional courses to align directly to the skills needed for the nbn™ rollout.
- The development of carefully constructed skill based programs is where we excel – the art of training.
- Unlike other training organisations which focus primarily on technology, PERPETUAL LEARNING INSTITUTE is structured toward Field Operations staff. Technology theory is combined with large quantities of practical exercises to reinforce the learning process.
- PERPETUAL LEARNING INSTITUTE is the market leader with regards to hands on practical training that is supported by our real world learning simulators – “We bring the field environment to you”.



### COURSE INFORMATION

#### Course Locations:

Melbourne, Adelaide,  
Sydney, Hobart,  
Canberra,  
Cairns,  
Brisbane,  
Darwin and Perth



Location and timing will be advised at enrolment

Class Size: 10 - 12 students

Duration: 5 days

#### Included:

All materials used for practical exercises, technical manuals for each attendee, test equipment, emulation environment.  
1 week phone support.