



## TRAINING

- Expert Training in the Latest Technologies
- Industry-Demanded Certifications

## PCB TECHNOLOGY

### Quality & Inspection

- IPC-A-610 Instructor & Operator Certification

### Soldering & Assembly

- IPC J-STD-001 Instructor & Operator Certification

### Bare Board Inspection

- IPC-A-600 Instructor & Operator Certification
- IPC-6012 Instructor & Operator Certification

### Rework & Repair

- IPC-7711 & IPC-7721 Instructor & Operator Certification

### Hand Soldering Skills

- Soldering Basics, Wires & Terminals, Lap Solder Joints, Through-Hole and Surface Mount Training

### PCB Fundamentals

- Component Identification
- Electrostatic Discharge

### PCB Design

- Essentials of PCB Design
- IPC Designer Certification

## COUNTERFEIT COMPONENTS

### IDEA-STD-1010

- Seminars & Workshops
- IDEA-STD-1010 Essentials
- SAE AS5553 Counterfeit Electronics

## CABLE & WIRE

### HARNESS TECHNOLOGY

#### Quality & Inspection

- IPC-A-620 Instructor & Operator Certification

#### Hands-On Labs

- Crimping & Harness Assembly Training

## TECHNICAL SUPPORT

- Manufacturing Start-Up
- Process Evaluation
- Subcontractor Qualification
- Equipment Evaluation
- Lead-Free, ESD, Process and Quality Audits

## IPC-A-620 CERTIFIED IPC TRAINER WITH OPTIONAL LABS

### IPC/WHMA-A-620 Instructor Training & Certification Program

#### IPC/WHMA-A-620

### COURSE DESCRIPTION

This 4-day, lectured course is a comprehensive, instructor-level certification that teaches inspection and assembly criteria for all three classes of cable and wire harness assembly. This course is based on the IPC/WHMA-A-620, "Requirements and Acceptance for Cable and Wire Harness Assemblies", the most widely used inspection specification for the cable and wire harness assembly industry.

#### OPTIONAL HANDS-ON LABS (additional fee applies)

This is an optional 1-day, hands-on lab for those who would like to practice the skills of the criteria they have learned throughout the week by following an assembly print and building a harness assembly.

### WHO SHOULD BECOME CERTIFIED

This course is for anyone responsible for the quality and reliability of cable and wire harness assemblies—including trainers, engineers, quality supervisors, inspectors and manufacturing personnel responsible for quality assurance.

### PREREQUISITES

- Completion of IPC's on-line IPC Essentials program\*
- Completion of IPC's on-line Policies & Procedures program\*
- Understanding of the Cable Wire Harness Industry
- Understanding of the English language, oral and written

\*In order for IPC Certification to be issued, completion of these two on-line programs must be completed outside of class via IPC's website. If the IPC Enhanced Policies and Procedures Exam is also listed, in the IPC Pre-Course section, complete this exam on-line outside of class.

### CLASS SIZE

Maximum number of students is limited to ten (10) to provide greater instructor interaction. Call early to reserve your space.

**eTRAINING** On-line training is available for some courses. Please inquire.

**ON-SITE TRAINING** Please call a training consultant and ask about customized course content, on-site training and training around your production schedules.

**REGISTRATION** For up to date pricing and more information on any of the EPTAC programs, or to enroll, please call us toll free or visit eptac.com.

**Toll Free:** 1-800-64-EPTAC  
**email:** register@eptac.com  
**Web:** eptac.com

### COURSE OUTLINE

#### DAY 1

- Module 1: General and Applicable Documents
- Module 2: Wire Preparation
- Module 3: Soldered Terminations
- Module 4: Crimp Terminations

#### DAY 2

- Review and Review Exercise
- Module 4 (cont.): Crimp Terminations
- Module 5: Insulation Displacement (IDC)
- Module 6: Ultrasonic Welding
- Module 7: Splices
- Module 8: Connectorization

#### DAY 3

- Review and Review Exercise
- Module 8 (cont.): Connectorization
- Module 9: Molding / Potting
- Module 10: Cable Assemblies and Wires
- Module 11: Marking Labeling
- Module 12: Coaxial and Biaxial Assemblies
- Module 13: Wire Bundle Securing

#### DAY 4

- Review and Review Exercise
- Module 13 (cont.): Wire Bundle Securing
- Module 14: Shielding
- Module 15: Cable/Wire Harness Protective Coverings
- Module 16: Finished Assembly Installation
- Module 17: Testing
- Module 18: High Voltage
- Review and Exams

### DAY 5 - OPTIONAL HANDS-ON LABS (additional fee applies)

#### Module 1: Lab Overview

- Review harness assembly print, materials and tooling

#### Module 2: Wire Prep and Solder Termination – no soldering

- Cut and semi-stripping five wires
- Install wires onto the harness board

#### Module 3: Lug Crimp Terminations

- Cut, strip and crimp two styles of lug-type terminals
- Install wires onto the harness board

#### Module 4: Pin Crimp Terminations

- Cut, strip and crimp two styles of pin terminals
- Install wires onto the harness board

#### Module 5: Coaxial Terminations

- Cut, strip RG59 wire; assemble two coaxial connections
- Install wires onto the harness board

#### Module 6: IDC Terminations

- Cut, strip CAT5 wire; crimp two IDC connectors
- Install wires onto the harness board

#### Module 7: Mass Terminations

- Cut, ribbon cable; crimp two mass termination connectors

#### Module 8: Harness Securing

- Secure the cable using tie-wraps and lacing cord