



## **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

# HAND SOLDERING OPERATOR CERTIFICATION - LEAD & LEAD-FREE

Wires & Terminals, Through-Hole & Surface Mount Hand Soldering Training & Certification Program

J-STD-001 / IPC-A-610

## **COURSE DESCRIPTION**

Customize this course by selecting only the days/modules that meet your training requirements.

Using both lead and lead-free alloys, Hand Soldering Operator Certification introduces the basics of soldering in Wires & Terminals, Splicing: Lap, Wrap and Hook, Through-Hole and Surface Mount Technologies and Rework. Students will learn about electrostatic discharge, industry terminology, equipment familiarization and the accept/reject criteria for all three technologies. Hands-on efforts include the soldering and inspection of five (5) different types of terminal connections; the assembly, soldering, inspection and basic rework of two (2) through-hole boards with 100 inspection points; and the assembly, soldering, inspection and basic rework of a surface mount board with over sixty components. This program is a "hands-on" experience. With approximately 75% of the time spent doing, students experience the technology first hand.

### WHO SHOULD BECOME CERTIFIED

Hand Soldering Operator Certification is a course designed to teach the fundamentals of soldering technology and an introduction to basic rework skills. Anyone involved in the assembly of electronics with Wires & Terminals, Splicing: Lap, Wrap and Hook, Through-Hole and Surface Mount components should be certified to this program.

## **PREREQUISITES**

An understanding of the English language, both oral and written is all that is required to benefit from EPTAC's Hand Soldering Operator Certification Program. ESL Students are encouraged to inquire.

## **CLASS SIZE**

Maximum number of students is limited to ten (10) in order to provide greater instructor interaction and a complete hands-on experience. 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 - REOUIRED

- Introduction to Soldering
- Specifications/Applicable Documents
- Terms and Definitions
- Tools and Material Selection and Maintenance
- · Procedures in Making a Good Solder Joint
- Soldering Technology-Wires & Terminals
- Acceptability Criteria
- Wire Preparation
- Terminal Connections and Soldering
- Practical Session-Soldering Terminals

#### DAY 2

- Splicing: Lap, Wrap and Hook
- Acceptability Criteria
- Splices Lap, Wrap and Hook
- Heat Shrink Sleeving
- · Practical Session-Splicing
- Introduction to Through-Hole
- Specifications/Applicable Documents
- · Electrostatic Discharge
- Through-Hole Terms and Definitions
- Tools and Material Selection and Maintenance
- Procedures in Making a Good Solder Joint
- Soldering Technology Through-Hole

### DAY 3

- Practical Session-Through-Hole Practice Board
- Instructor/Student Review
- Acceptability Criteria
- Solder Rework Techniques-Through-Hole
- Through-Hole Component Removal Methods
- Practical Session-Through-Hole Rework-Practice Board
- Instructor/Student Review
- Practical Session-Through-Hole Test Board
- Instructor Inspection/Feedback

## DAY 4

- Introduction to Surface Mount
- Specifications/Applicable Documents
- Surface Mount Terms and Definitions
- Tools and Material Selection and Maintenance
- Procedures in Making a Good Solder Joint
- Soldering Technology Surface Mount
- Practical Session-Surface Mount Practice Board
- Instructor/Student Review

#### DAY 5

- Acceptability Criteria
- Solder Rework Techniques-Surface Mount
- Surface Mount Component Removal Methods
- Practical Session-Surface Mount Rework-Practice Board
- Instructor/Student Review
- Practical Session-Surface Mount Test Board
- Instructor Inspection/Feedback
- Course Summary/Review