

## Training Overview

### IPC J-STD-001 (Rev H) Requirements for Soldered Electrical & Electronic Assemblies

#### J-STD-001 Overview

'J-Standard 001' document, is the sole industry-consensus standard covering soldering, materials, and processes. This standard describes materials, methods and verification criteria for producing quality soldered interconnections and assemblies. This revision contains easy to understand requirements, & some illustrations are provided for clarity.

Previous conflicts with other IPC and industry standards have been resolved and this standard fully complements IPC-A-610.

#### Training objective

To qualify & certify candidates, as J-STD-001 Certified IPC Specialists (CIS).

To provide hands-on instruction and training on specific modules in the IPC J-STD-001 document.

Upon satisfactory completion of the course, candidates will be capable of making correct "accept/reject" decisions, using the acceptability requirements within the standard. And be capable of creating soldered connections that meet the requirements.

#### The Program

The training is provided by a Certified IPC Trainer (CIT), with theory being carried out with the aid of the IPC document, & PowerPoint slides. A detailed study of the standard is made reviewing the processes, requirements and classifications. Each optional training module will provide practical demonstrations & tuition at the bench. Soldering irons, components, hand tools, PCBs, solders & fluxes etc are provided, & the soldering process & theories are discussed & put into practise.

#### Who should become a J-STD-001 Certified IPC Specialist?

Operators, technicians, engineers, test technicians, quality assurance personnel and others responsible for the quality and reliability of electronic assemblies, are all excellent candidates for the program. Pure inspectors may only wish to sit the 'Inspection' module (Module 5), where soldering skills are not required.

#### Program Pre-Requisites

Ideally, candidates should have minimal soldering skills & some experience in electronic assembly, but this is not essential. Certification in, or an understanding of, IPC-610 (Acceptability of Electronic Assemblies) would also be an advantage.

#### Certification

In order to attain IPC J-STD-001 certification, candidates must pass the simple online 'open book, multiple-choice tests', & prove their ability to carry out standard hand soldering processes, to an acceptable level.

The certificate is valid for 2 years, following module 1 completion, after which, the candidate will have the option to re-certify. Candidates can sit a re-certification course up to 6 months prior to the certificate expiring (without losing any time on the certification term).

#### Mandatory training module (theoretical training only)

- Module 1: Policies & Procedures, General, Applicable Documents, Materials, Components & Equipment, Soldering & Assembly Requirements, Cleaning, Rework & Repair

#### Optional training modules (theoretical & practical training. All include inspection skills)

- Module 2: Wires & Terminal Connections
- Module 3: PCB's, Coatings, Encapsulation & Staking, Witness Stripes
- Module 4: Through-Hole Mounting & Terminations, Jumper Wires (*req's mod 3*)
- Module 5: Surface Mounting of Components, Jumper Wires (*req's module 3*)
- Module 6: Inspection Skills (*no soldering skills, suitable for inspectors*)

*(NOTE: module 6 is awarded, if modules 1 to 5 have been satisfactorily completed, with the addition of inspection practical skills)*

#### Program duration

The course duration is 1 day per module, depending on trainee experience.

#### What do you need to provide?

For the theoretical sessions, a training, meeting, or conference room (or any uninterrupted area) is required.

For the practical sessions, bench space with powered sockets & adequate lighting are required.

#### What do STEM Training provide?

IPC Standards (for training only), flipchart, handouts, laptop, tablets for tests (one per candidate), projector & screen.

And for practical sessions, soldering systems, fume displacers, iron tips, practise PCB's (& associated components), solders, fluxes, cleaning agents, hand tools & protective mats (if required).

