STEM Training
STANDARDS TRAINING IN ELECTRONICS MANUFACTURE

IPC Certified IPC-7711/7721 Application Specialist

Training Overview

IPC-7711/7721 (Rev D)
Rework, Repair & Modification of Electronic Assemblies

IPC-7711/7721 Overview
IPC-7711 & 7721 were the first formal training programs produced by IPC, & are specifically designed for component rework, modifications & PCB repair. The IPC-7711 part of the standard (Rework) runs in conjunction with IPC-610, for "accept/reject" requirements. The standard is intended for manufacturers of consumer, commercial or military products.
IPC-7711/7721 is IPC's most comprehensive, hands-on, training program with a large part of the course spent at the bench. This is a more advanced course where candidates will be evaluated on both theoretical & practical work.
Any company that adopts IPC-7711/7721, can use the program to address the training requirement identified in the standard (section 1.6) as well as help satisfy the training requirements of ISO-9001.

Training objective
To qualify & certify candidates as IPC-7711/7721 Certified IPC Specialists (CIS).
To provide hands-on instruction and training on specific modules in the IPC rework, repair and modification document.
Upon satisfactory completion of the course, candidates will be familiar with a number of acceptable processes that will give a high standard of rework, repair or modification.

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 product classifications. Each optional training module (below) provides practical CIT demonstrations & tuition at the bench. Tools such as 'Continuous Vacuum', 'Hot Air', 'Hot Tweezers' & 'Profiled Tips' are demonstrated & practised.

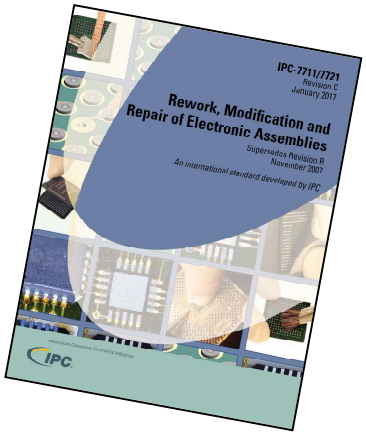
Who should become an IPC-7711/7721 Certified IPC Specialist?
Repair and Rework operators, technicians, engineers, test technicians, quality assurance personnel and others responsible for the quality and reliability of reworked, repaired or modified assemblies, are all excellent candidates for the program.

Program Pre-Requisites
Candidates should have reasonable soldering skills & ideally have some experience in Repair and Rework, although this is not essential. Certification in, or an understanding of, IPC-610 (Acceptability of Electronic Assemblies) would be an advantage.

Certification
In order to attain IPC 7711/21 certification, candidates must pass the simple online, open book, multiple-choice test, & prove their ability to carry out standard repair & rework 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
- Module 1 Common Procedures and introduction to IPC-7711/7721.

Optional training modules (select any that suit your business requirements);
- Module 2 Wire Splicing, Basic Procedures and Techniques
- Module 3 Conformal Coating
- Module 4 Through Hole Component Rework
- Module 5 Chip and MELF Component Rework
- Module 6 Gull Wing Component Rework. Quad Flat Paks, Small Outline ICs, D-Paks
- Module 7 J-Lead Component Rework (PLCC)
- Module 8 BGA Rework (NON IPC module). NOT AVAILABLE
- Module 9 PCB Laminate Repair
- Module 10 PCB Circuit Repair



Program duration
If all modules are selected then the course will span no more than 5 days.
The length of individual modules are available upon request.

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, handouts, laptop, projector & screen. And for practical sessions, soldering/rework systems & tips, practise PCB's (& associated components), solders, fluxes, cleaning agents, hand tools, protective mats & fume displacers.
STEM Training provide each candidate with a tablet, for the online tests.