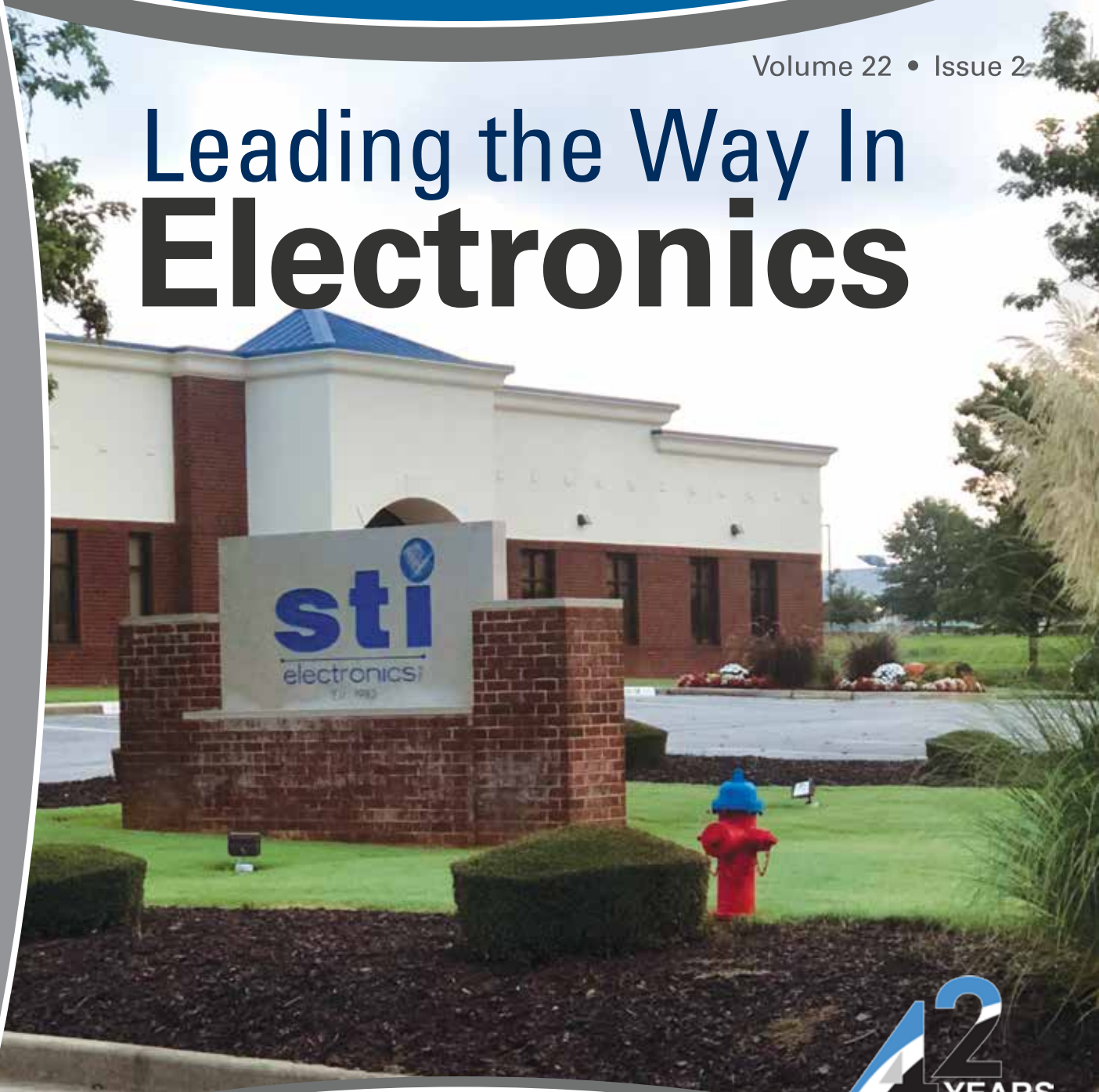




Volume 22 • Issue 2

Leading the Way In Electronics

NEWSLETTER



www.stiusa.com

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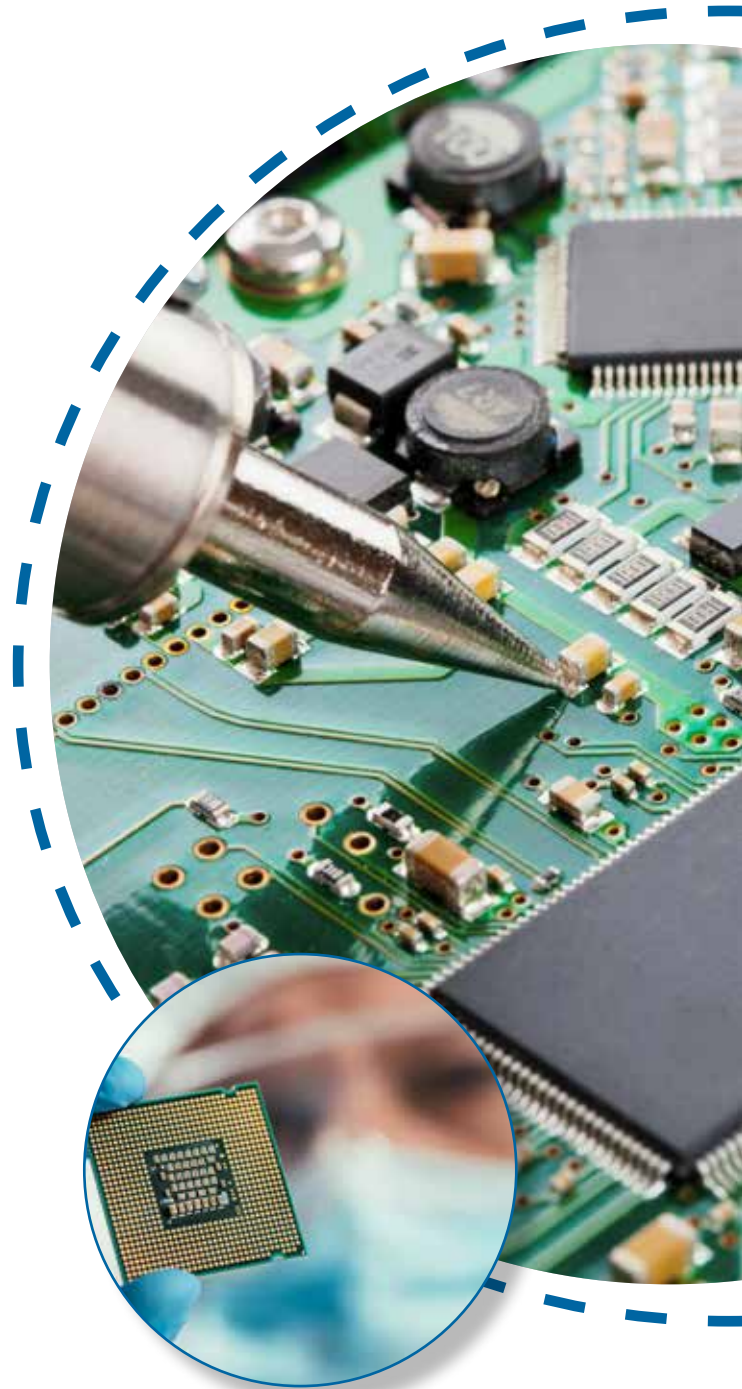
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Dave's World

AUGUST, 2024

I've been traveling for STI for 42 years. A little over 3 million miles and a lot of stories. (That will be my book, not a single article.) I've sat with actors/actresses, athletes, politicians and many other interesting and sometimes famous people. Last month, I was on a less than 200 mile flight and it was my best one yet.

I was coming home from Washington, DC where I had been for PCBAA's annual fly in. I'd also been at IPC's first fly in of the year a few weeks before. As I mention almost every year, if you aren't attending these events and telling our representatives your issues, you are missing a golden opportunity to help your company, our industry and our country. Anyway, I'm mostly a Delta guy so of course I'm connecting through Atlanta. Being mostly a Delta guy, my status with them many times gets me upgraded and that happened to work on this particular trip including the Atlanta to Huntsville portion. My connection in Atlanta (FYI – my favorite domestic airport to connect) was a little shorter than usual so when I arrived at my gate, they had already finished preboarding and were a couple of zones into the process. I went ahead and got in the line in the jetway and eventually made my way to my window seat in row 1. I looked across the aisle and saw a couple of older gentlemen wearing baseball caps signifying they were veterans. I looked again and noticed the hats said World War 2. That was when I realized I was riding with a couple of WW2 veterans coming home from the 80th Anniversary ceremony of the invasion of Normandy. A few minutes later, after everybody was on board, our pilot announced that there were 3 very special guests on the plane (turns out there was another sitting a couple of rows behind me) returning from Normandy which elicited the loudest round of applause I've heard on an airplane. (Except for maybe once after an emergency landing in Los Angeles on a flight from Ontario to Chicago but that will be in the book, not the article.) Atlanta to Huntsville is only an approximately 30 minute flight so shortly we were back on the ground where we taxied between two airport fire trucks giving us a water cannon salute. After we arrived at the gate, everyone stayed seated while our 3 VIPs and the volunteers that traveled with them, made their way off the plane. They were all able to walk off (with some assistance and remember they were coming in



David Raby

President/CEO
draby@stiusa.com

from Paris so they had already had a long day) and had wheelchairs waiting at the bottom of the jetway. We followed them through the gate area and out of security where there were several hundred people, many with American flags, cheering and welcoming them home. It was great to see the reception but I'm not sure anyone made it with completely dry eyes. I was lucky to be able to shake hands and briefly talk with two of the guys and thank them for their service 80 years ago. It was special and I don't know how it will ever be topped.

I appreciate all those who have, and still do, serve our country. I'm also proud of the variety of ways STI supports those efforts every day.

A handwritten signature in black ink that reads "David Raby". The signature is written in a cursive, slightly slanted style.

President/CEO





STI Electronics, Inc., is a full-service organization providing training services, training materials, analytical/failure analysis, prototyping, and contract electronic manufacturing.



Mission Statement

STI's mission is to provide electronic contract manufacturing, solution-based engineering, analytical services and training resources to the electronics industry.



Quality Policy

STI will consistently provide products and services that meet or exceed the requirements and expectations of our customers as well as industry standards.



Continuous Improvement

STI relentlessly pursues continuous improvement and excellence in projects, products, processes, and services, and defines success as getting the job done right the first time.

UP CLOSE and PERSONAL



Interview with Jason Appleton

Meet Jason

Job Title: **Master Instructor**

How long have you been part of STI Electronics? **5 months**

What do you do for STI? **I train/certify and recertify our nations talent in the ways of IPC and NASA specs and guidance documentation.**

Just For Fun

Tell us about your family. **I am a father of two kids (Morgan and Blake), and a husband to my amazing wife. We are fortunate to be able to have my mother-in-law live with us.**

Tell us about your pets. **We have one rescue dog her name is June.**

Do you have a favorite place to visit? **I don't have one favorite place to visit, I am more for exploring new places I haven't been yet!**

What's your favorite type of music/song/artist? **I really do love all types of music. (Jazz, Country mostly older country, Rock, Pop, Alternative, Big Band, Heavy metal and some Rap)**

What is your favorite movie or TV show? **I don't really have a favorite show or movie. There are so many great ones out there, its to hard to narrow it down.**

What's your favorite meal/food? **I love Italian food. The more homemade the better I like it.**

Tell us about any hobbies that you enjoy. **I love exploring new places, taking road trips, photography, nature trails and spending time with my family.**

What is your favorite motto or quote that summarizes your approach to life? **You can't change yesterday but you can change the impact you make tomorrow.**

What's one fun thing to know about you? **I love history, especially the years 1920's thru 1950s. These are some of the most impactful times for humanity.**

What's your favorite thing about working at STI? **I love all my coworkers, they make coming to work not feel like a job.**

What is your favorite non-profit to support and why? **Blake Appleton Foundation. We run this non-profit to help kids who are currently in chemo treatment for any kid who has been diagnosed with cancer who may have a special need. Like getting them computers or tablets to help them stay connected with loved ones or so they can attend school virtually and not fall behind. My son had cancer and passed away. I really understand the need that families go through while their loved one is getting treatment and just want to make it as easy I can for them. They already have enough to deal with.**



HAPPENINGS

Congratulations

We have had several anniversaries to celebrate. We would like to congratulate each one on achieving this anniversary with us! They have all worked hard for this accomplishment and we truly appreciate their dedication.



Roger • 17 Years



Christy • 19 Years



Collin • 7 Years



Shelia • 28 Years



Frank • 24 Years



Michelle • 17 Years



Sue • 11 Years



Chuck • 19 Years

thank you



Erick • 7 Years



Travis • 7 Years



James • 6 Years



Mark • 24 Years



Yolanda • 5 Years



Sharon • 7 Years



Joel • 7 Years



Katrena • 14 Years



Caroline • 5 Years



VINEGAR SYNDROME

Have you seen Vinegar Syndrome on your LCD Display Modules?

Have you had foggy and illegible LCD displays?

You May Have Vinegar Syndrome...Did you smell it?



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Flowers-of-Sulfur (FoS) testing is an ASTM standard test method used to determine susceptibility to sulfur induced corrosion. FoS testing is done by suspending the samples in a sealed chamber with a controlled temperature and humidity source and a powdered sulfur source. Common metallic coatings such as silver and copper/copper alloys are susceptible to sulfur corrosion and with the push for lead-free products these coatings have become more prevalent, such as immersion silver (ImAg). FoS testing is also used to evaluate the porosity and coating quality of metallic coatings. Poor coating quality or porosity can be examined through FoS testing because the sulfur will be able to penetrate the coating and react with the base metal, forming sulfides of copper or silver, resulting in dark spots forming on the surface.

The images on the next page show a PCBA with an ImAg finish after being submitted to a 7-day FoS test. After 7 days of exposure, corrosion around the vias has already started to appear. This

corrosion occurs due to the sulfur attack on the silver finish. Once sulfur induced corrosion has started it can continue to grow overtime, known as creep corrosion, and can eventually lead to a failure when in a moist, sulfur-rich environment. When using an ImAg finish it is essential to consider the end environment of the PCBA and take the necessary steps to protect the ImAg finish if needed. This can include conformal coating or covering all non-soldered areas with solder to remove the exposed silver and protect the underlying copper pads.

The FoS test is a good test for evaluating conformal coating materials and uniformity of coating for resistance to sulfur gas ingress since not all conformal coatings are resistant to sulfur gas ingress. This test method can be utilized to evaluate undercoated, missing coating, and even the porosity of conformal coatings. The FoS test can also be used to evaluate and assist in determining the correct thickness and application techniques of conformal coatings.



Figure 1. LCD with vinegar syndrome



Figure 2. Cover on LCD where vinegar syndrome has occurred and caused the foggy appearance.

The STI analytical laboratory has the capabilities to test and evaluate samples containing LCDs for exposure to fluctuating temperatures and humidity.

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Commitment

**Do you have a question?
Do you need information?
CHAT with us online!**



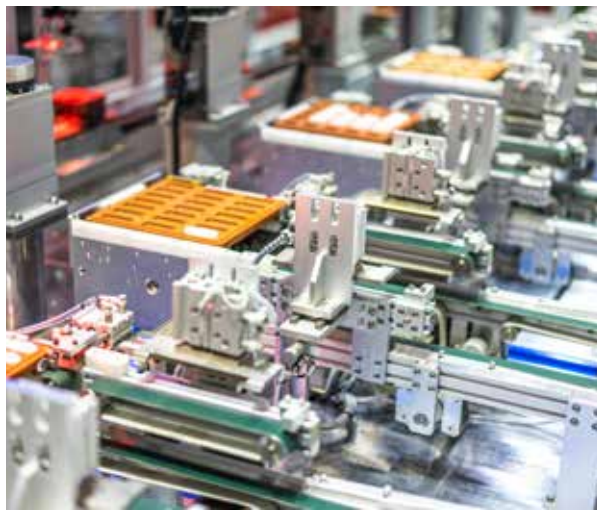
We are dedicated to enhancing customer satisfaction and building strong customer relationships for both external as well as internal customers regardless of divisional or department lines.



Certifications/Capabilities

AS9100D/ISO 9001:2015 • ISO 13485:2016 (Pending) • ITAR REGISTERED
Cage Code 1JX07 • System for Award Management (SAM) Registration
NIST 800-171 Compliant • Joint Certification Program (JCP) Registration (DD 2345)
IPC J-STD-001/IPC-A-610 • Qualified Manufacturers Listing (QML)
IPC J-STD-001 Space and Military Addendum Qualified Manufacturers Listing (QML)
IPC 1791 Qualified Manufacturers Listing (QML)
Approved on DOE (Department of Energy) MASL
IPC Authorized Training Center • IPC Distributor

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- Microelectronics Lab (Clean Room)
- Rework & Repair Services
- Material Failure Analysis
- Analytical Lab Services
- Testing
- Prototype Manufacturing Services

800.767.4919

Training Resources

- Training Services
- Training Materials
- Assembly Aids
- Online Training
- Custom Courses
- IPC Training Center
- Multiple Locations
- Curriculum Development
- Inspection

800.858.0604



ONLINE COURSES

✓ Register Now

In addition to our classroom and on-site training courses, STI offers on-line training and remote testing for the following IPC lecture based Certification/Recertification courses:

- IPC-A-610 Certified IPC Trainer (CIT) and Certified IPC Specialist (CIS)
-Standard required for class
- IPC/WHMA-A-620 CIT and CIS
-Standard required for class
- IPC-A-600 CIT and CIS
-Standard required for class

Note: Currently hands-on courses are not available for on-line training or remote testing for CIT's or CIS's.

The Certified Subject Matter Expert (CSE) on-line courses are also available for

- IPC-A-610, IPC/WHMA-A-620, IPC-A-600, IPC-7711/7721 and J-STD-001
-Standard required for class

Exams that are required for these courses can now be proctored remotely using IPC EDGE.

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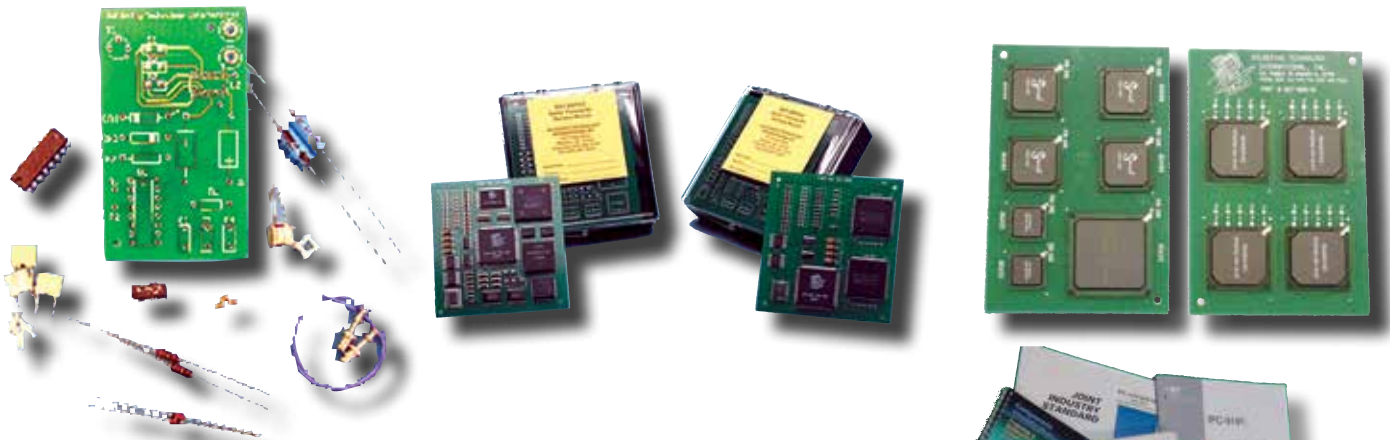
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IPC 7711/7721 Revision D Course Update

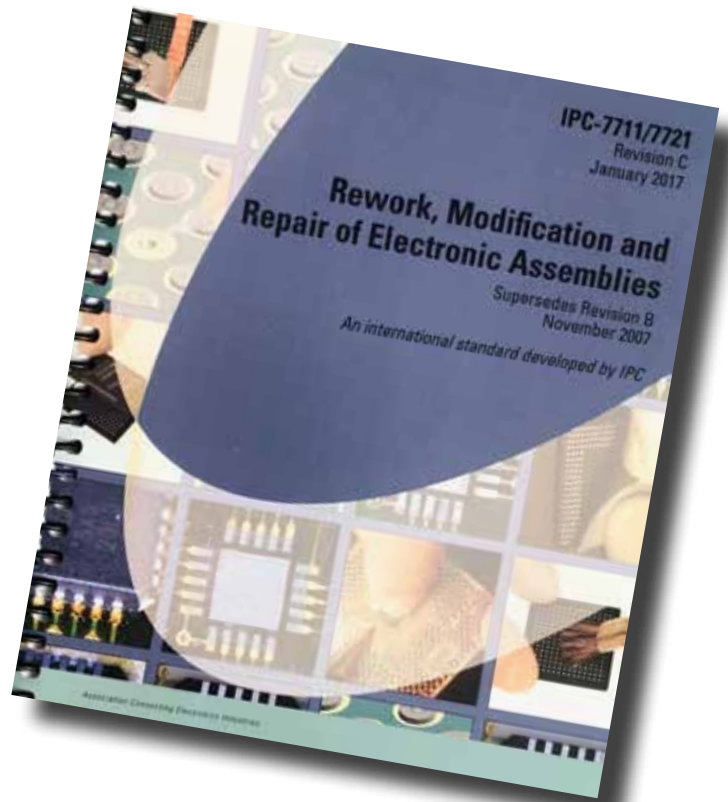
By Frank Honyotski, MIT
IPC 7711/7721 Training Committee Co-Chair



Frank Honyotski
Master Instructor
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Recently a new course update has been released for the IPC-7711/7721 Revision D. Some of the significant changes include the following:

- Section 1 of the document was completely changed in layout of the text and content. Module 1 of the training course will look very different to long time users of the document.
- The BGA training lecture was updated with current procedures. Older procedures were removed from the training lecture that most companies no longer use. These older procedures however still remain in the 7711/7721 guidelines for any users that still need them.
- More procedure options are now available for many of the projects in the course.
- A couple of extra jumper wire projects to through-hole component leads were added.
- The training kit that is currently used for the revision C course is still being used for the revision D course.



The CIT training to revision C can still be taught for as long as your employer chooses. If you start training to the new revision you do not have to come back to class until your recertification is due. The new training materials are available on the IPC Edge platform, and you can download them and start training to revision D right away. New documents will need to be purchased and as an official IPC distributor you can acquire all the documents from our Customer Service department.

www.stiusa.com/training



Chat Live with Us

**Do you have a question?
Do you need information?
CHAT with us online!**

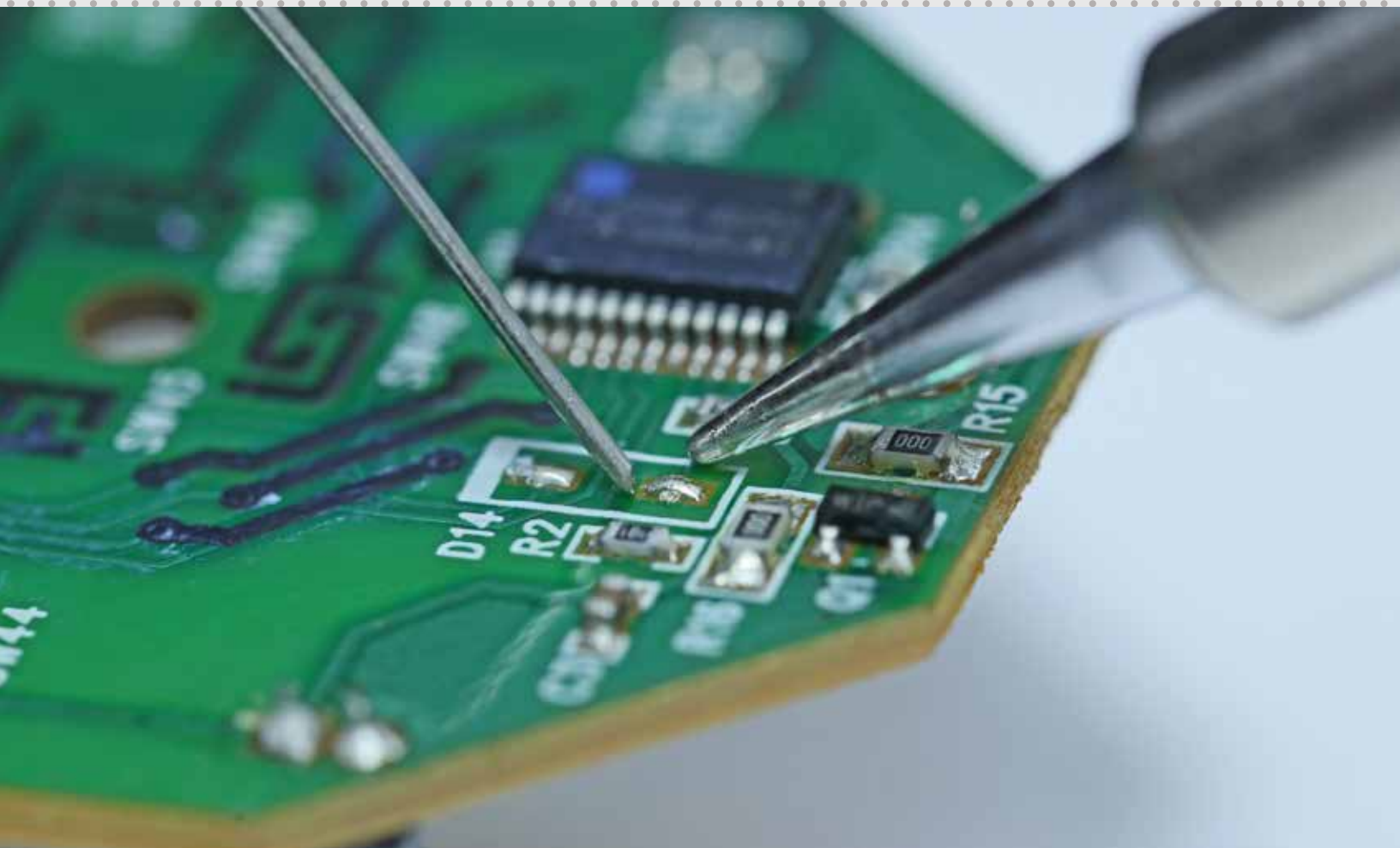




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