



Welcome

Thank you for taking the time to read our first issue of DATA/News. The purpose of this newsletter is to keep you informed of developments in the industry, as well as in our companies: Northtouch Canada and Comtree.

Northtouch Canada Inc. and **Comtree Inc.** are leading electronics manufacturer's agents representing a wide array of world class assembly machines, test, programming, verification and diagnostic tools for the electronics industry.

To find out more about the companies we represent and their products, we invite you to visit our website and download our line card: <http://www.northtouch.com/documents/Linecard-Oct2005.pdf>

If you do not wish to receive future issues of DATA/News, simply contact us and we will remove you from our distribution list: <mailto:info@comtreeinc.com>

If you find this newsletter useful, please forward it to your friends and colleagues or invite them to download an e-copy: <http://www.northtouch.com/documents/DATA/News1-1.pdf>

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We're on the Web!

See us at:

www.northtouch.com
www.comtreeinc.com

Benoit Giroux
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Smart Material Control for Electronics Manufacturing



When companies partner with Cogiscan, they tap into our unique knowledge and expertise in RFID technologies and Material Control. We are uniquely qualified to help your business identify and quickly implement the best solutions to meet today's challenges such as:

- Inventory Cost Reduction
- Leaner Manufacturing
- Lead-Free/ RoHS compliance
- Traceability
- Error-Proofing

OVERVIEW:

Cogiscan offers a complete range of specialized hardware and software modules that enable Smart Material Control for the electronics manufacturing industry. Cogiscan focuses on material control to provide practical and cost-effective solutions that ensure the **right material** is at the **right place** at the **right time**. The

Cogiscan platform offers a means to achieve real-time tracking, traceability and control of all materials on and off the assembly line. This includes electronic components in matrix trays or reels, tooling such as feeders and stencils, consumables like solder paste and adhesives, and other items critical to the assembly process. Cogiscan's unique technology also reduces line change-over time and eliminates the risk of human errors during machine and workstation setup.

Cogiscan can easily fill any functionality gaps and seamlessly integrate with existing manufacturing systems.

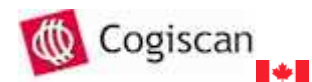
RFID Smart Feeders:
 Cogiscan's revolutionary **RFID Smart Feeder** retrofit kit is

robust and flexible enough for use on all placement machine types. The Cogiscan RFID smart feeder system can be used in combination with Cogiscan software applications, or can be integrated with feeder set-up verification software from third-party suppliers to enhance the performance and reliability of the existing system.

- The RFID Smart Feeder system can be retrofitted to an existing placement machine in the field.
- Your inventory of "dumb" feeders can be easily and economically converted to "Smart" feeders

Are you interested in learning more about Cogiscan?

Please e-mail us at info@kogiscan.com, or visit us on the web at www.kogiscan.com





Ask us how we
can help YOUR
company become
Lead-Free!



Managing the Lead-free Thermal Process

Evidence shows the two most critical issues related to lead-free manufacturing are

- a: The changes in materials and
- b: The thermal process.

The thermal process window shrinks considerably due to the higher melting temperature of lead-free solders. The narrow process window is the result of three intersecting process windows: Solder, Components and Substrates. Irrespective of the smaller process windows, the process limits are also less forgiving. Once the limits are exceeded, defects and other quality issues quickly follow. Therefore, a new approach to managing the thermal process is needed using a three step approach to process development:

- **Define** the process specifications. KIC's profilers and process development tools contain the specs for hundreds of the most popular solder alloys, ensuring that the correct process window is defined for each application.

- **Measure** the part profile, and how this data accommodates the required process spec. Such measurements reveal whether an in-spec process can even be achieved.

- **Optimize** the process. KIC's Navigator and Auto-Focus automatically select the oven setup that yields the "one best" recipe, hence centering the process in the middle of the window.

There are two alternative optimized process settings, depending on the user's goals:

1. Maximize throughput — KIC's Navigator or Auto-Focus identifies the fastest conveyor speed that yields an acceptable process for each individual oven, ensuring that the reflow oven does not become the bottleneck in the production line.
2. Minimize oven changeover time — Reflow ovens tend to be the slowest part of the line to change over because of the time required to stabilize the new temperature.

The solution is to keep the same temperatures for all applications, but select different conveyor speeds, which adjust virtually instantaneously. Again, the Navigator or Auto-Focus will identify whether conveyor speed changes will yield an acceptable process.

Are you interested in learning more about KIC?

Please e-mail us at sales@kicmail.com, or visit us on the web at www.kicthermal.com



Introducing Specnor Tecnic

Specnor Tecnic is a global manufacturer of wave soldering, selective soldering and reflow soldering equipment. Our customers, located in North America, Asia and Europe, represent contract manufacturers and OEM's throughout the electronics assembly industry.

Specnor has earned the respect and loyalty of its customers around the world. We offer a complete line of Specnor Lead Free wave solder

machines, site specific Lead-Free mini-wave selective soldering systems, and reflow ovens ready for lead-free, as well as spare parts for Electrovert™. Our research and development, engineering solutions and world-class training have earned us the reputation for manufacturing consistent, reliable and compatible equipment, delivering the best value in soldering equipment available in the market today.

Are you interested in learning more about Specnor?

Please e-mail us at specnor@microtec.com or visit us on the web at www.specnor.com



The 10 Most Important Questions You Should Ask About Your Lead-Free Wave Soldering Machine

Visit our webpage to download this special report from Specnor:

<http://www.northtouch.com/documents/Lead-Free.pdf>



Ask us how we
can help YOUR
company become
Lead-Free!

Fluxes, Materials in Lead-free Must be Able to 'Take the Heat'

By Lance Larrabee, Cobar Solder Products

When soldering with lead-free materials (e.g., flux and solder pastes), heat is the most important parameter to consider, because it affects everything from component packages to board materials to the flux. It's fairly well understood that along with the generally higher temperatures requisite of lead-free alloys, the risk of thermally induced damage to components and board material is also higher. Another concern is the effect of higher temperatures on the stability and activity of the flux, and the potential for oven maintenance issues associated with burn-off of solvents and other flux components.

It's not just about peak temperature, though. The challenge for the flux chemist is to develop flux systems that provide greater thermal stability during heat exposure dwell time. Establishing this stability is more important than focusing on absolute temperature levels.

The process engineer implementing (or converting to) a lead-free process has, as a first concern, establishing sound metallurgy and long-term joint reliability for all soldered connections on a product or products. The achievement of such ensures long-time product reliability

and reduces the potential for failure in the field. Second on the list of concerns and issues is the changing process window associated with the production of lead-free electronics. When we begin looking at the materials used in lead-free soldering, the compatibility of the different components becomes critical.

Conversion to lead-free alloys (such as Sn-Ag-Cu, or SAC-alloys) means higher process temperatures, and thus more heat affecting every part of an assembly. The materials that contain both metallic and organic components will accommodate this additional thermal load in different ways.

Some of the effects on solder paste and flux associated with these higher temperatures include early evaporation of solvents, different melting characteristics, activation range, thermal decomposition and re-crystallization of certain constituents. These are some of the various chemical and physical changes in the materials on their journey along the temperature/time line of the process. One often-overlooked issue, however, are the implications of heat in the

production of solder powder - an essential component in solder paste. Heat has its own effect on the topography of the solder particle during the solidification of the droplet. The topography is influenced by parameters such as the cooling rate and the atmosphere in which solidification takes place. In turn, these impact the distribution of the alloying elements on the surface and the formation of passive films such as oxidation.

For the complete text of this article please refer to :

<http://www.northtouch.com/documents/Cobar.doc>

Are you interested in learning more about Cobar?

Please e-mail us at info@cobar.com, or visit us on the web at www.cobar.com



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News & Upcoming Events

August 25, 2005 Special 10th Anniversary SMTA Golf Tournament

On August 25, 2005, the SMTA held its 10th Annual Golf tournament. To celebrate this great achievement all proceeds were donated to a health organization; and who better than an association also celebrating a huge milestone:

This year **The Heart and Stroke Foundation of Quebec** is celebrating its 50th anniversary.

Great fun was had by all and we would like to thank all those who participated and gave generously.



Over \$5,000 was raised for the foundation.

Want to see more photos of this great event?

Simply visit our website:
<http://www.northtouch.com/SMTA2005.html>

November 21, 2005

Zuken releases Cadstar V8.0 with new features for lead free design

February, 2006

Read the next issue of *DATA/News*

March 29-30 2006

Get ready for the Canadian High Technology Show: More info in the next issue of *DATA/News*

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