

The TyrrellTech Times

Volume 131

January 2020

For Auld Lang Syne...



New Year... New Machines

What New Year's Resolution have you made for your business this year? In what direction would you like to expand? Would a Roland or Mimaki print and cut machine expand your sticker and signage offerings? Would a high speed UV printer from Canon give you the ability to push more large scale wall graphics? Would a laser engraver be the best things to offer something different to your customers, to make you their one stop shop for signage and promotional items? Whatever you need,



we are here to help-- call us up with your resolution wish list and we can work together to outfit you with the hardware to make it happen!



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The Colorado 1650 UV Gel Printer



**High Volume Printing, Super Ink Savings--
Print 12 Rolls a Month and It's Paid For!**

TyrrellTech has an exciting new product in our portfolio to share with you-

Canon

The Océ Colorado

1650 with Océ FLXfinish technology allows print providers to be more productive and cost-effective with their large format roll printing applications. Produce more output in less time at a lower cost through innovative Canon UVgel technology.

This printer is the ideal solution for high volume shops where speed and color consistency are important. It has certain claims to fame, including:

- * Extremely Low Ink Usage
- * Unattended production enables significant labor savings
- * Produce more in less time without sacrificing quality
- * One machine, 2 finishes, with no need to change ink or media
- * Highly accurate color and geometric consistency

The Colorado 1650 works with a new version of Canon UVgel ink, formulated for maximum flexibility. Océ FLXfinish technology, a new approach to LED curing, allows the user to choose between matte or gloss modes for each individual print to achieve different finishes, removing the need to change inks or media.

Want to learn more? TyrrellTech can help! Call 888-865-0300 or email info@tyrrelltech.com today!

"The miracle, or the power, that elevates the few is found in their perseverance under the prompting of a brave, determined spirit." **-Mark Twain, American Writer**

888-865-0300

tyrrelltech.com

9045 Maier Road, Suite A, Laurel, MD 20723

200 Route 31 North, Suite 109, Flemington, NJ 08822

2400 W. Copans Road, Unit 8, Pompano Beach, FL 33069

2815 Directors Row, Suite 600, Orlando, FL 32809

TYRRELLTECH TRAINING

Start the New Year Off Right! New Class Dates!
You MUST RSVP online or to info@tyrrelltech.com

TyrrellTech Training Tuesdays

Digital Printing Systems

You MUST RSVP to Reserve Your Seat: 888-865-0300 or info@tyrrelltech.com

FREE
Classes



Apparel & Heat Transfer

Learn more about both the CAD cut options for heat transfer materials and the possibilities of print & cut solutions in this apparel-focused class
Tuesday, January 7, 10 am - 12 pm



Laser Engraving- Oh, the Possibilities!

A laser engraver can make custom plaques, models, and specialty and promo items, all with a custom element and a high end finished look. Learn more...
Tuesday, January 14, 10 am - 12 pm



Adobe Illustrator Basics

Adobe Illustrator is a powerful tool in this industry. Spend time learning some basic navigation of the software to give you an introduction to Adobe.
Tuesday, January 28, 10 am - 12 pm



Digital Media 101

Walk through the variety of media available for a digital printer. Find how one machine can get you into stickers, wallpaper, backlit, banners & more.
Tuesday, February 4, 10:00 am - 12 pm



Color Management & Printer Maintenance

How does the computer make color, how is it interpreted, and what happens between file creation and print to manage color expectations?
Tuesday, February 11, 10 am - 12 pm



Apparel & Heat Transfer

Learn more about both the CAD cut options for heat transfer materials and the possibilities of print & cut solutions in this apparel-focused class
Tuesday, February 18, 10 am - 12 pm



Laser Engraving- Oh, the Possibilities!

A laser engraver can make custom plaques, models, and specialty and promo items, all with a custom element and a high end finished look. Learn more...
Tuesday, February 25, 10 am - 12 pm



Roland Versaworks Basics

Take a refresher course in Versaworks; Getting started, selecting profiles and setting up your print job.
Tuesday, March 3, 10 am - 12 pm

Training currently at these locations:

9045 Maier Road, Suite A, Laurel, MD 20723
200 Route 31 North, Suite 109, Flemington, NJ 08822
2400 W. Copans Road, Unit 8, Pompano Beach, FL 33069
2815 Directors Row, Suite 600, Orlando, FL 32809



The All New CWT Evolution

New worktable- CWT 1737 Evolution Coming Soon!

This machine, coming soon, will offer a heated top roller that can be manually controlled or remote controlled and lift legs to bring the table up to a good work height or down as needed-- stay tuned for more information on this innovative tool that can transform your work space!



PRODUCT SPOTLIGHT

New FC9000 Plotters from Graphtec

The flagship FC9000 Series is Graphtec's most advanced, versatile roll fed cutting plotter to date. Revered around the world for its dependable, high-precision cutting capabilities with both printed and unprinted materials, the FC Series is the ultimate finishing solution for the wide format signage, apparel, and automotive industries.

A newly developed feeding system and cutting head has further improved cutting quality of thin and thick materials ranging from delicate window tint to rigid magnet and high intensity reflective. ARMS 8.0 features the introduction of Graphtec's Datalink barcode generation system which efficiently loads and processes your jobs automatically.

Highlights of the new FC9000 Vinyl Cutter:

- * Media flanges to hold the roll of vinyl
- * A loupe tool to check blade health & depth
- * Clips on the side of pinch rollers instead of C clamps- easier to replace
- * Quieter when cutting
- * Datalink barcode system for job management



New Vinyl from General Formulations

General Formulations is showing off some cool new products to close out 2019-

They have their new GF218- an 8 mil gloss vinyl with block-out adhesive, meant for window graphics that cannot be seen through.

They have an already popular GF277- a 4 mil vinyl called Metrografix that is matte, removable, opaque, AND conformable.

And they continue to promote their GF333- the Automark drift product for vehicle decaling- an ultra calendered wrap vinyl (no rivets or bumpers) with adhesive that allows the installer to float the graphic before sticking it. This vinyl pairs with 247 gloss and 248 matte for flat surface laminates.

Call TyrrellTech to find out more about these products- 888-865-0300.

Graffiti Protection for Your Prints!

A 1.0 mil transparent DuPont™ Tedlar® Clear PVF Film with a solvent permanent pressure sensitive adhesive. Recommended for use in overlay applications requiring extended resistance to UV exposure, color stability or abrasion resistance. GF 108 made with DuPont™ Tedlar® is graffiti resistant. See cleaning recommendations listed at www.generalformulations.com. Designed to extend the exterior exposure resistance of graphics, decals, and nameplates. This overlay will protect inks and graphics from fading caused by exposure to UV radiation.



Third Party Ink... Revisited, Again!

Third party inks have been out and on the market for some time now. We thought it time to revisit the issues that we discussed when our third party ink article was first in September 2008 and again years later. "Time will tell," we thought at the time. Oh, how true it was.

The OEM (Original Equipment Manufacturer) ink, comes with a guarantee. From Roland, that guarantee against fading is three years. From the third party ink manufacturers, it is more of an unknown. But that isn't even the most important fact. Guarantees that come from media manufacturers always have a caveat related to what ink they are printed with. For example, if a Roland customer buys Oracal 3551 Rapid Air vinyl and they pair it with Oraguard 290 laminate, to get the five year guaranteed by Oracal, they cannot use just any ink. That guarantee is only with certain, specified OEM inks; no testing has been done at all with any third party inks. If you are selling a media combination in any part because of the guarantee that comes with it, then risking it not lasting as long as promised is probably not a risk you should be willing to take. It just isn't worth it!

We had an interesting situation recently. A customer who was using third party inks gave us a color test file—just solid blocks of color—printed on their machine, on Roland paper, with Versaworks. He asked that we bring that media and that file back to our office and print it with our Roland inks, same settings. We did, and we found surprising results. The third party inks, which are typically advertised to be "as good or better" than their OEM counterparts, had a matte finish on this glossy paper. No Eco Solvent inks that we have encountered have acted that way—they typically take on the finish of the media that they are printed on. One more example of the fact that it is not just the same ink in a different container! It just isn't worth it!

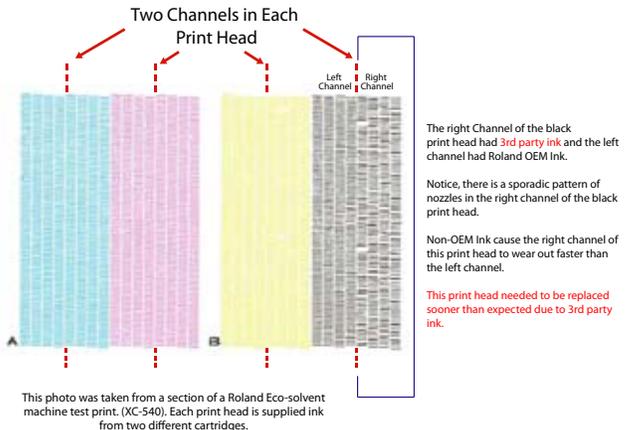
Service was, and still is, a major concern with third party inks. Yes, there have been third party ink companies that have paid in full for damage done to and repairs performed on printer using their inks. But what is more alarming is the likelihood that third party inks can and have caused damage to printer. The printers that you buy are set up and tested to run the inks they are made to work with. The third party inks tend to have different chemistry, be it more solvent or a different solvent. They are thicker, and the viscosity of the ink and how it is forced through the print heads is an important factor in keeping the machine running smoothly. These thicker inks come through the heads differently, and they are also more likely to leave a mist in the machine that sticks to many of the parts. We have seen machines affected by this "haze," which can cause premature wear on and replacement of anything that it comes into contact with, such as the dampers and their O-rings, the cap tops, and more. It just isn't worth it!

We had someone the other day who was using third party inks, and after a while of not being able to figure out what was wrong with their machine, we finally determined that it was a screw that had come loose on their third party ink cartridge. Yes, that is poor quality. And the problem is, the repair bill was just for the time that was spent (\$295), but add that to the cost of the down time and the work that couldn't be printed while the machine was being serviced. It just isn't worth it!

Color management has always been a very important part of the printing business. People provide you with Pantone colors, specific CMYK colors, and you are expected to match them, consistently. Adding in the third party ink variable with these types of jobs is asking for them to be rejected. If your inks are different at all—truer, duller, more matte, whatever the difference—prints

that you did in the past with your original OEM ink WILL NOT match your new prints. And the fact of the matter is, those picky customers that put the new print up next to the old print that you did aren't going to want to hear that the colors are different so that you could save a few bucks on ink. They want it to match, and that is why they gave you their business. Don't risk it, it just isn't worth it!

We recently refurbished a printer in house and we removed a DX4 head from a Roland XC-540. The way the ink comes through this printer, it is fed from two black cartridges loaded in the back of the machine. In the case of this printer, one of the black inks was a Roland OEM ink—the other was a third party ink. Check out how the test print looked before the inks and head were replaced—I bet you can guess which half of the black print head was being fed with third party ink. It just isn't worth it!



People switch to third party ink to save money. The OEM inks cost, at most, 25 cents per square foot. So, at full coverage on a 4' x 8' banner, \$8.00 for ink on the whole banner, worst case scenario. The third party inks are typically 2/3 the price of the OEM inks. That is about 16 cents per square foot, and that makes your full coverage 4' x 8' banner ink cost \$5.12 in ink. That is ONLY a difference of \$2.88 per banner. Do you think you might be able to work that additional cost into the selling price of your banner? That difference cannot possibly put you in danger of losing the job. Struggling with lost guarantees, service issues, color management issues and more—that is a lot of time and energy spent to save some money. Everyone's costs go up, you know! Don't spend your time switching to unknown inks to save those pennies. It just isn't worth it.

So, our conclusion is still the same as written in September 2008: "Even in a tough economy, the best business advice I can give you is to spend your time prospecting for jobs that, in the course of a year, will equal thousands of dollars. Spend your time doing that rather than trying to shave a few measly dollars off of a job. History has shown that, in a tough economy, the companies that continue moving forward by prospecting for jobs now and planting seeds for the future end up reaping the benefits of their work and emerge much stronger when the economy recovers. Their counterparts hunker down, stop spending, and try to wait it out, and when the economy recovers, these guys basically start all over again... if they survive at all."

People have tried third party ink and they have come back to their OEM ink... why? The repairs were too much, and not always covered. The color gamut wasn't the same, or the ink finish was different. The savings were not enough to worry about—trusting the ink was worth more. Did you notice what each paragraph above ended with above? To drive the point home one more time... It just isn't worth it!

ENGRAVER CORNER

Universal Laser's 9.3 micron Laser Tubes- Why Would I Need One?

9.3 μm Wavelength CO₂



What determines the wavelength of a CO₂ laser?

A CO₂ laser's output wavelength can vary based on the particular isotopes contained in the carbon dioxide molecules. Heavier isotopes will cause longer wavelength transmission. By selecting the appropriate gas, CO₂ lasers can be made to emit wavelengths between 9 and 11 microns.

Which ULS systems can support a 9.3 micron laser?

Any single laser system is capable of supporting one 9.3 micron laser. For dual systems, the PLS6.150D and ULTRA systems can be ordered with dual 9.3 micron lasers. Standard dual PLS, ILS, and XLS systems can support one 9.3 micron laser in the bottom slot.

Why use a 9.3 micron laser?

Depending on the absorption characteristics of the material being processed, some wavelengths may be absorbed by the material better than others. This concept is similar to how black objects tend to absorb heat while white objects do a better job of reflecting heat. Many materials absorb the 9.3 micron wavelength better than the 10.6 micron wavelength, resulting in reduced heat effects when laser processing with the 9.3 micron laser source.

Overall, the wavelength and power level of laser can impact laser processing quality for a variety of materials. Processing quality will depend on the specific material's absorption characteristics and chemical composition. When the laser beam interacts with a material, the photon energy from the laser is transferred to the material and converted to other forms of energy. For polymers, this photon energy is either 1) converted to chemical energy for direct bond-breaking, resulting in a "photochemical" laser material interaction, or 2) converted to heat energy for rapidly raising the temperature to melt or vaporize the material, resulting in a "photothermal" interaction. When laser processing is more photochemical, there is a reduction in heat effects, kerf width, and by-product deposition. When laser processing is more photothermal, the photon energy is not as readily absorbed by the material, so the CO₂ laser essentially "pushes" thermally through substrate to remove material.

A 9.3 micron laser source may be worth considering if you are processing any of these materials:

- * PET/Mylar
- * Polycarbonate
- * Nomex
- * PTFE/Teflon
- * FR4
- * PEEK
- * Nylon - with additives (oil-filled, solid lubricant filled, and molybdenum disulfide)
- * Polyolefins (LDPE, HDPE, LLDPE, MLDPE)
- * Kapton/Polyimide
- * Pyralux
- * Heat Transfer Materials
- * Parylene
- * Many adhesives
- * Delrin

Laser Magic Cleaner

**Cleaner/Degreaser
that works like
magic on laser
projects!**



The LASER MAGIC all purpose concentrate is a cleaner, degreaser, and spot remover. It puts cleaning power into plain old water... cleaning everything! Just spray on and wipe off- contains no acid, no bleach, no ammonia and is non-flammable. A great all purpose cleaner for product off of your laser- Get your 24 oz. bottle today for just \$5.99.

Call 888-865-0300 or email info@tyrrelltech.com today!

**Before
LaserMagic...**



...And After!

**TyrrellTech has one
January birthday to celebrate!
John Brogan- January 4-
Laser Engraver Sales & Support**

**And we welcome a new
little one in Orlando-
Welcome Dallas Cohen,
Born November 15!**

