Terribly tricky terrific toner techniques.

Our usual reminder here that the Resource Bin is now a two-way column. You can get tech help, consultant referrals and off-the-wall networking on nearly any electronic, tinaja questing, personal publishing, money machine, or computer topic by calling me at (520) 428-4073 weekdays 8-5 Mountain Standard Time.

I’m now in the process of setting up my new Guru’s Lair web site you will find at (where else?) www.tinaja.com. This is the place you go for instant tech answers. Among the many files in our library, you will find complete reprint sets for all of the Resource Bin and other columns. Plus a brand new Synergetics Consultant’s Network.

You will get the best results if you have both Netscape Gold and Acrobat Reader 3.0 installed.

Terrific Toner Tricks

The toner that’s used in most laser printers is a mixture of black stuff and hot glue. That black stuff (or carbon) part obviously could get used to dirty up otherwise clean sheets of paper. But that hot glue (or polyethylene) part is frequently ignored. Giving you all sorts of very unusual new toner based opportunities.

Let’s review a few of the emerging possibilities...

Printed Circuits

The polyethylene toner component makes an excellent etch resist for use in printed circuit processing. After a number of false starts, we now have simple and effective ways of getting the toner out of the printer and onto the printed circuit board stock.

The Toner Transfer System by Dyna Art Designs is one good product. An alternative is sold by Techniks.

In either case, a 1:1 printed circuit positive is laser toner printed onto a magical transfer medium. Heat and pressure then get used to transfer the toner onto your super clean printed circuit board material. Etching then proceeds as usual.

You’ll get the best results when you use a real heat press to do the actual transfer. On older laser printers with a fusion wiper pad (such as a Canon CX or SX), it also pays to use a “dry” pad (rather than one providing a thin film of fusion oil) when you are using these materials.

Note that the Dyna Art address and phone number has newly changed.

Decals

The word “decal” can have different meanings to lots of different users. A traditional water slide decal was some artwork that you soaked in water till its glue softened. The artwork image then got slid off onto a suitable final home. Railroad and aircraft models have long used this type of decal.

These days, though, a decal could mean “any old stick-on”. With fancier artwork backed by a more permanent adhesive and a release sheet.

You can easily make your personal custom decals. Note that a single dot in a 600 dpi printer at an HO model railroad scale of 87:1 is around one sixtieth of an inch. Lettering as small as a scale one inch high could in theory be accommodated.

Making Decals on your Computer and Printer, along with reasonably priced materials and techniques. Larry has explored all sorts of different printers and color processes, and has come up with some real winners.

Contact him for further details. One source for these decal stocks in larger quantities is Andrews Decal.

Transfer Papers

Special heat transfer toners are sold for most laser printers. The suppliers advertise in Recharger magazine.

A product called Color Laser Copier Transfer Paper can let you move any copier or toner images onto T-shirts, mousepads, caps, or whatever. Usual quantity cost is thirty cents a sheet.

One brand is Photo Trans available from Pro Distributors. There’s also a Photo Trans Opaque. Which helps you apply transfers to dark colors or black T-Shirts. Basically, your opaque goes down first and creates a white surface the size and shape of your image or artwork. The regular PhotoTrans then overprints the image.

The final image transfer takes place with an iron or a suitable heat press. As before, a real heat press gives you more consistent results.

Usually, your images are printed backwards or horizontally reversed. So they end up between your fabric and the actual heat transfer material. Thus “locking them in” and giving you fair protection against normal wear and machine washings.

To backwards print in PostScript, use -1 1 scale. Lots more on this is stashed on the PostScript library shelf of www.tinaja.com.

Special papers are optimized for heat transfer, inkjet, thermal wax, dye sub, or for color copier systems. Two other sources for these materials are Conde and Alsina.

Cross Linking

Uh, I am not allowed to say too much about this, because it is still in development. But the polyethylene in toner is a polymer. One that can get chemically modified for any desired degree of adhesion or sticktocity. Thus, you could toner print onto a suitable transfer sheet, spray on the special glorp to convert your toner into real self-stick adhesive, and then stick the toner to your final product.

Stay tuned for details on this one.

Laser Buddy

One example of a temporary cross linking is that Laser Buddy spray. This makes toner way glossier and much blacker. At nine dollars per can, it is particularly useful for improvement of camera ready art or certificates.

A solvent dissolves a portion of the toner and adds some extra plastic to it. When your solvent evaporates, the toner gets blacker, shinier, and more durable. More gooder.

But note that a little of this goes a long way. Too much and you’ll lose resolution. Halftones and greys do not usually improve and may end up blotchy and a lot worse. Use this only in a well ventilated area. And note that Laser Buddy is not suitable for printed circuits since it deposits both on the printed and unprinted portions of the final page.

Great stuff otherwise, though.

When the Pressure is On

As with nearly anything else, there are two ways to melt toner: heat and pressure. You can apply lots of heat and little pressure. Or you can get the same effect with little heat and lots of pressure. The older ColorBus system is rather pricey, since this one is mainly intended for printshops and specialty advertisers. What it does is take any black and white or color copier or a toner print and literally force it into the surface of a hard substrate. Such as a wooden plaque or whatever.

Only modest temperatures (of 200 degrees Farenheit) are combined with very high pressures. This is far below the standard toner melting point of 375 degrees Farenheit.

You could probably do the same thing yourself by working out some suitable tensioning scheme and some sort of pressure roller. No reason that your machine should cost more than $99. Note that it is much easier to get high pressure along a line contact.
instead of over an entire surface.

There’s also a new mystery super secret Brooker DIT toner process. I do suspect this is just a variation on the long available ColorBus system. Or perhaps at a different point along the temperature-pressure continuum. I did find their poorly done $10 video demo to be singularly uninformative, since it just shows you a bunch of wooden blocks with toner on them. I’d also guess their high profile patent is totally useless as well.

More on how trivial it is to bust do-it-yourself patents can be found in BUSTPAT.PDF on www.tinaja.com

Wood Micro Veneers

There’s another approach you can easily explore to put toner onto wood items. Simply and cheaply.

An outfit called Cards of Wood has created what they call micro veneers. Which are ultra thin sheets of wood glued together in one or two layers. In several dozen assorted flavors.

Yes, some of these are thin enough to run through certain laser printers.

Be sure to pick a printer that is heavy stock rated and has a fairly straight paper path option.

The ancient Canon CX might be a good choice. If you don’t want to risk this, you can use one of the transfer sheet methods instead.

As their company name suggests, all these micro veneers are quite well suited to unusual business cards. But note they can also be glued or double stuck onto any other piece of wood, a trophy base, a letter opener handle, or whatever. Curved, even.

Several thicknesses and ply options are stocked. They also can do custom and specialty work.

Although made from interesting species of genuine wood, their grain patterns somehow do not seem quite as dramatic as I’d expect. Probably owing to how a veneer is made. The cards are surprisingly sturdy. Because of the “plywood” construction.

Prices are as low as a dollar per page sized sheet. A sampler of all the different woods is also offered.

Lots of possibilities here.

Some Magazines

Your single most important toner magazine is Recharger. Here you’ll find tutorials and ads for all sorts of refil toners, specialty products, and assorted bits and pieces.

Several little known magazines outside of their specialty fields also offer lots of new opportunities and ideas here. POP & Sign Design is an example from the point-of-purchase display industry. Or check out Awards and Engraving. People who are newly discovering the power of powder.

As with just about any industry, the commercial T-shirt folks have their own trade journals. Two biggies here are Impressions and PrintWear.

Your foremost silk screen mag is apparently Screen Printing. There is also that Screen Printing and Graphics Imaging Association. You’ll find them online at www.sgia.org.

A favorite sign magazine of mine is SignCraft. Sign Business is also useful. The printshop pubs are Quick Printing with its great Helene’s Hotline finder.
service; and *Instant Printer*.

For books, videos, and training info on laser printer service and repair, your best source is *Don Thompson*.

One good way to pick up new mags and the insider pubs in just about any field is with the new and free online *Oxbridge Media Finder* you’ll find at [www.mediafinder.com](http://www.mediafinder.com)

**Foil Effects**

This old opportunity has kind of just been stumbling along. It somehow just missed ever hitting the big time. Probably because it never ended up quite reliable enough and that most supplies and machines were always horrendously overpriced.

The "hot glue" part of toner can be used to grab hot stamp foils. Giving you brilliant colors, gold and silver metallics, and other special effects.

Early pioneers in this area were *Omnichrom* and *Kroy Color*. Neither firm still remains in the toner-to-foil business. But just about any of those specialty paper houses do offer small stick-on foil kits that can get used to add hot stamp effects to a letterhead or business card.

A two-step process gets involved, where you will run a foil carrier back through your laser printer or through a special heat fusion machine. Usually you’ll tape a small piece of foil over only what you want to emphasize.

A supplier for roll fed production machines is *Banner American*. Selling a *Fuser 1200*. A second competing firm seems to be *Foilmax*.

One of many bulk foil sources is *Transfer Print Foils*. Hot stamping foil magazines do include *Inside Finishing* and the aptly named *Foiled Again*.

But I’ve just found an exciting new replacement for these foil effects that seems much better and much cheaper for most users. And far more reliable. This involves new...

**Micro Dry Inks**

The smartest toner trick of all might be to not use toner at all. I’ve been playing with the *Alps MD2010* printer and am quite impressed with its color capabilities. This $370 street machine uses special ribbons of *micro dry* inks.

Their color is stunning.

You’ll find a four ribbon series of black, magenta, cyan, and yellow. A second group of ribbons *directly* print foils as metallic silver, metallic gold, magenta foil, and cyan foil. And the third group of costlier *photorealistic* ribbons is for newer machines in the series. Which can give you results that are in every way comparable to "real" color photo processing.

Even to a glossy overprint.

Thanks to *Adobe Acrobat*, the Alps MD2010 is fully compatible with real PostScript. Its powerful print drivers automatically make color separations and even do retouching for you.

Specialized T-shirt transfer iron-on papers and photorealistic media are available.

Yeah, the print speed is somewhat less than glacial and your per-page costs are far higher than toner. But I am finding this beast especially useful for BOD book covers, shipping and disk labels, foil letterheads, fancy business cards, and specialty ads.

These Alps printers also perform extremely well with the Labco decal materials. Their foils are truly opaque and thus can look good on any color background. Even black.

More on BOD in my *Book-on-demand Publishing Kit* and on the BOD library shelf of [www.tinaja.com](http://www.tinaja.com) Per my nearby *Synergetics* ad.

**This Month’s Contest**

For our contest this month, just tell me about any unusual new ploy for toner. Or some related product or a substitute technology that I may have missed out on.

There should be a largish pile of my new *Incredible Secret Money Machine II* books going to the dozen or so better entries, plus an all-expense-paid (FOB Thatcher, AZ) *tinaja quest* for two that will go to the very best of all.

Send all your *written* entries to me here at *Synergetics*, rather than to *Nuts & Volts* editorial.

Let’s hear from you. ♦

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Microcomputer pioneer and guru Don Lancaster is the author of 33 books and countless tech articles. Don maintains his no-charge US tech helpline found at (520) 428-4073, besides offering all of his own books, reprints, and consulting services.

Don also offers a free catalog full of his unique products and resource secrets. The best calling times are 8-5 on weekdays, Mountain Standard Time.

Don is in the process of setting up his Guru’s Lair at [http://www.tinaja.com](http://www.tinaja.com)

Full reprints and preprints of all Don’s columns and ongoing tech support appear here. You can reach Don at Synergetics, Box 809, Thatcher, AZ 85552. Or send any messages to his US Internet address of don@tinaja.com