

Engraving Art Transfer Process:

For those who do engraving, but like me are not skilled enough to draw the artwork directly on the work-piece, an alternate method is to use a transfer of printed artwork. There are several methods for transferring engraving artwork, but one of the best is to use a transfer solution and transparency film. The transfers from this method are highly detailed and are durable enough to not rub off easily while you engrave the piece. There is a lot of information on the engraving forums about this process, but there is often a few details lacking. I have found that there are some basic requirements for the transfer to be successful. Below are the key components for the artwork transfer.

1. Transfer Solution
2. Transparency Film
3. Printer Ink

Transfer Solution:

The intent of the transfer solution is to create a sticky surface on the work-piece to pull the ink off of the transfer film. There are many formulas to be found on the internet for transfer solutions. Most of them are a mixture of Dammar Varnish and either Isopropyl alcohol or Zippo lighter fluid. The percentages given for the two components is typically between 5% and 30% Dammar varnish, with the balance being either alcohol or lighter fluid.

There is however a source for a pre-made transfer solution. The mixture is supplied by Tom White. Tom also supplies transparency film and has his own graver sharpening system for sale. Below are the addresses of his web site and his email. Tom has good transfer tutorials and advice on his web site.

www.twdesignshone.com/
twdesigns@commspeed.net

Transparency Film:

This is simply the transparent film used for over head projectors. The important aspect of the film that you use is that must NOT be compatible with the ink that you use to print your artwork. The printer ink is to be transferred to the work-piece. So you want to use a transparency film that is not compatible with the ink, so that the ink does not stick tightly to the film. I use transfer film number EBG32+811. It can be purchased from Esjay Unlimited. Below is the contact information for the film. Tom James is very helpful and is extremely knowledgeable about the engraving transfer process.

Esjay Unlimited
Contact: Tom James - 1-800-524-2528
Email: Sales@EasternDataPaper.com

Tom White also sells transparency sheets that he says work very well.

Printer Ink:

The proper type of ink to use for engraving transfers is PIGMENTED ink.

There are two types of printer ink; dye based ink and pigmented ink. Until a few years ago, dye-based inks were provided in most "home use" printers. Dye ink had a wider color range and lower cost. Pigmented inks were primarily found in professional grade photographic printers. In the last few years, improvements in both dye and pigment inks have resulted in inexpensive "home use" printers being generally available with at least one pigment ink cartridge.

Pigmented ink consists of a very fine powder of solid colorant particles suspended in a liquid carrier. Inks marketed as "Archival Quality" are usually pigment-based. The larger black ink tank in a color printer is typically pigment-based. This large tank is used mainly for text only printing.

An internet search for "pigment ink printers", will find lists of printers that use pigment based inks. As new printers enter the market every day and these lists may not all be current, it would be wise to check multiple lists. Nearly all of the printer manufacturers now have photo printers that use at least one pigment ink tank.

Epson® Inkjet Printers using DURABrite® Ultra pigment ink. Epson was the first company to ship a printer that used pigment inks.

Canon® Inkjet Printers - Cartridges numbers beginning in PG are Pigment based and CL or CLI are Dye based.

Print Settings:

When you are ready to print your engraving transfer, it is important to check the printer and/or the document's print settings. When you click "print", a pop-up window should appear, where you can select the settings for the printing of the document. It is impossible to list all of the settings that may be available with every printer and software. But, those listed below are those which are often available on photo printers. Shown are the settings that I use.

Media Type: Plain Paper

Document type:

It seems counter intuitive, but do not use the photo printing setting. The photo printing will likely use the dye based black ink tank, or a combination of the color ink tanks to create black. Select "document" or "text" settings. Text is generally always printed using the black pigment ink tank.

Color:

Grayscale, or black and white. Again, you do not want the printer to use the dye based color cartridges to print.

Print Quality: High

Color/Intensity:

Try the "Auto" color/intensity setting. If your transfer is not dark enough to see well, change to manual settings and set the darkness and/or intensity to a dark setting.

Possible Printer Issue:

It is possible to purchase a printer which is not designed to print on transparency film. It doesn't "see" the transparent film and thinks it is out of paper. To remedy this situation, I created a WORD document that is just a black bar about 1/2" wide, running down one side of the sheet. I print this black bar on the transparency film using my laser printer. The film is compatible with laser printing, so the bar will not wear off for the life of the sheet.

Making the Transfer:

The surface of the work-piece must not be too highly polished. If the surface is too smooth, the transfer solution does not stick well to it and will peel off of the surface. I sand the work-piece with nothing finer than 800 grit paper just before making the transfer.

The surface must be absolutely clean before applying the transfer solution. I use a Q-Tip and 91% isopropyl alcohol to clean the surface. Next, I go over the surface again with another Q-Tip that has just a little bit of the transfer solution on it.

I then apply the transfer solution to the work-piece with a Q-Tip that has been dipped in the solution and then wrung out lightly against the inside of the solution bottle. I apply the solution by rolling the Q-Tip on the surface. You don't want too much solution on the surface. If you leave a drip or have the solution too thick on the surface, the transfer may not work well in that spot. After applying the solution, blow on the work-piece. If you have applied the solution correctly, the surface should develop a dull haze on it.

Cut the artwork from the transparency sheet and tape the transfer along one edge to the work-piece. This is so you can lift the transparency to see how the transfer is working. I use a ball-point pen to burnish the transfer against the work-piece.

If all goes well with the transfer, you will have a highly detailed image of your artwork applied to your surface.

Transfers with a Laser Printer:

It is also possible to do engraving art transfers with a laser printer, though the transfer may not be as dark and detailed as possible with an ink jet printer.

Print your artwork on a piece of typing paper. Tape one edge of the artwork to your work piece.

Wet a folded paper towel with acetone. Not sloppy wet, but thoroughly dampened.

Wet the back side of the typing paper transfer with the acetone dampened paper towel. The correct "wetness" of the typing paper is when the printed artwork barely soaks through to the top side of the paper. If you get the paper too wet, the printed artwork will begin to bleed into the typing paper and look splotchy.

Hold the typing paper in place until it dries. Carefully peel the paper off the work piece.

The acetone should have melted the toner and transferred it to the work piece.