ID Making Operating Guide

by Doug Farre

For Informational Purposes Only : An introduction and word of caution

I want to start off by saying that none of the information outlined in this guide should be used in the process of manufacturing fraudulent identification cards. Although real government issued documents may be used as examples, they should only be used as examples to what you may model your identification cards like. The use the of the information in this document for the purpose of producing fake or fraudulent IDs would be criminal and I strongly advise against it. Let's start off by describing the Texas fake ID laws, in an attempt to dissuade you further.

The following was quoted from http://www.smu.edu/healthcenter/alcoholeducation/adp_fakeid.asp

POSSESSION OF FAKE IDENTIFICATION

Section 521.453, Transportation Code

Under 21 Years of Age: Class C Misdemeanor (Up to $500 Fine)

A person under the age of 21 years commits an offense if the person possesses, with the intent to represent that the person is 21 years of age or older, a document that is deceptively similar to a driver's license or personal identification certificate unless the document displays the statement "NOT A GOVERNMENT DOCUMENT" diagonally...on both the front and back of the document in solid red capital letters at least 1/4 inch in height.

The document is deceptively similar if a reasonable person would assume the document was issued by DPS, another agency of this state, another state, or the United States.

Section 521.456 Transportation Code:

Class C Misdemeanor (Up to $500 Fine):

A person commits an offense if the person possesses with the intent to use, circulate or passes a forged or counterfeit instrument that is not made by the appropriate authority (DPS, another agency of this state, another state, or the United Stated).

DELIVERY OR MANUFACTURE OF COUNTERFEIT IDENTIFICATION

SECTION 521.456 Transportation Code:

Class A Misdemeanor (Up to $4000 Fine, and/or 1 year in jail):

Possesses with the intent to sell, distribute, or deliver a forged or counterfeit instrument that is not made or distributed by an authority authorized to do so under a state, federal, or Canadian law.

Third Degree Felony (2-10 years in State Penitentiary):

Manufactures or produces with the intent to sell, distribute, or deliver a forged or counterfeit instrument that the person knows is not made by the appropriate authority.

TAMPERING WITH GOVERNMENTAL RECORD

Texas Penal Code, Section 37.10

Felony, Third Degree:

An offense under this section is a felony of the third degree if it is shown on the trial of the offense that the governmental record was a license, certificate, permit, seal, or similar document issued by government, by another state, or by the United States.

MISREPRESENTATION OF AGE

Alcoholic Beverage Code, Section 106.07

A minor commits an offense if he falsely states that he is 21 years of age or older or presents any document that indicates he is 21 years of age or older to a person engaging in selling or serving alcoholic beverages.

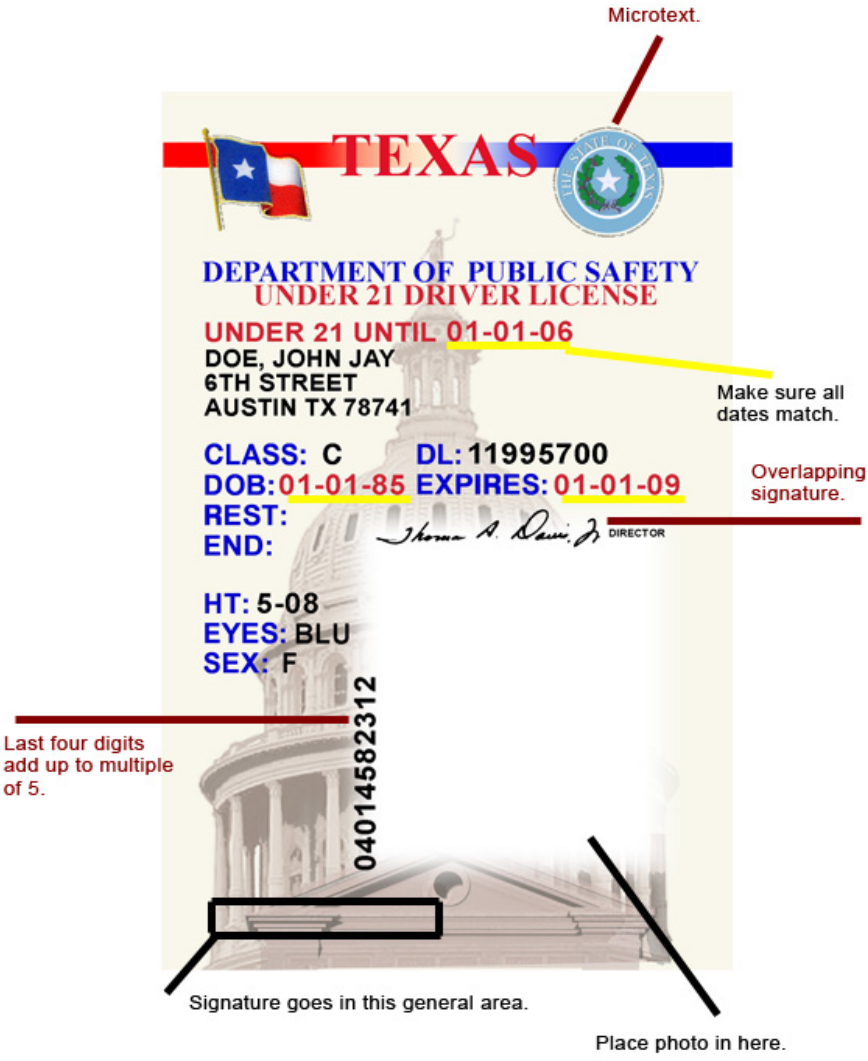
So basically you're looking at a Class C for having one, a Class A for selling one, and a Third Degree felony for making one.

PART ONE: The Process : An Overview

We will start with a high level overview of the process, and then go into the details in the second part. It is strongly suggested you read the entire guide from start to finish several times before starting on your document making process. At this point you have to ask yourself the purpose of your identification manufacturing scheme. Most reasons would probably fall along the lines listed below:

Produce high security identification documents for your organization, small business, or club.

To start off the process of manufacturing your new identification cards, your first step will be to acquire/create/develop a template. Below is an example of an AAMVA approved drivers license that contains all necessary attributes you should consider when creating your own personalized template for your venture.



When creating your template, it will be a good idea to make it so each text field can be edited individually. The most common eye color codes are as follows:

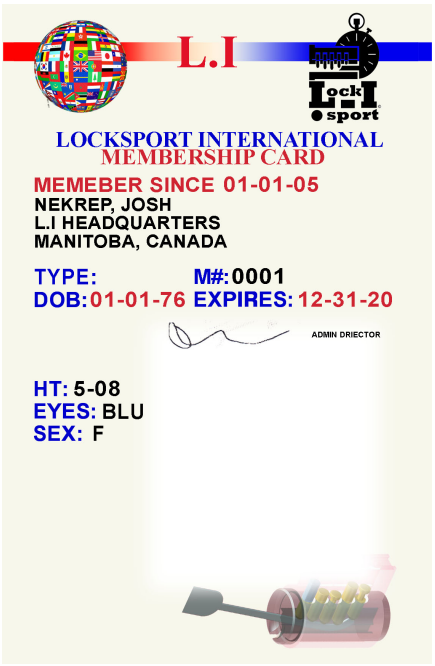
COLOR	CODE
Brown	BRN
Blue	BLU
Green	GRN
Black	BLK
Hazel	HZL

Some security features will most likely be impossible to reproduce without the proper equipment. For instance, take a look at the scanned image of a real Texas driver's license below:

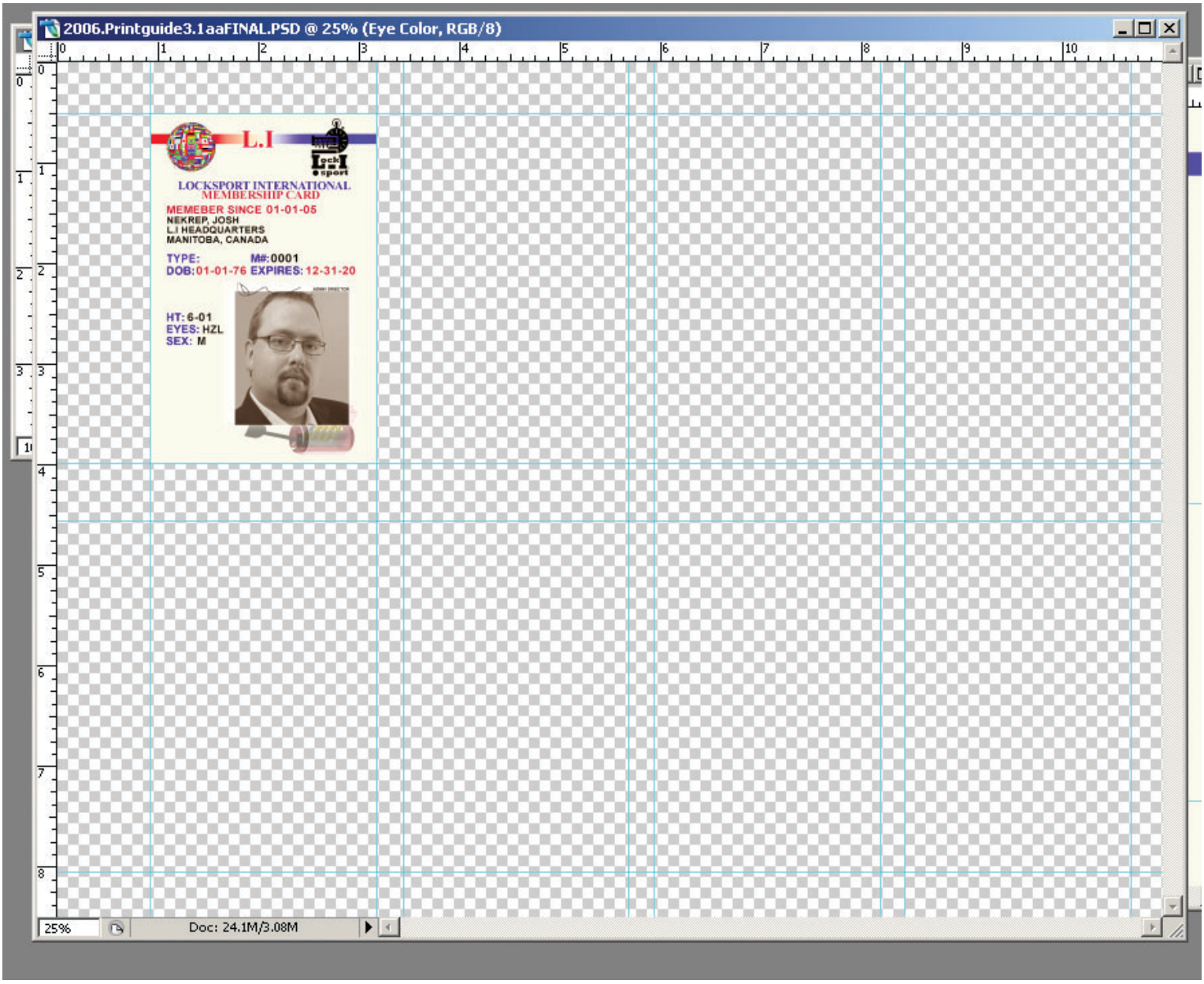


Now, if you look very closely at the portrait image you will see yellow diagonal lines running from the bottom left to the top right. This is an important security feature that only emerges when the driver's license is scanned on an image scanner. This type of security will be hard to implement into your ID template.

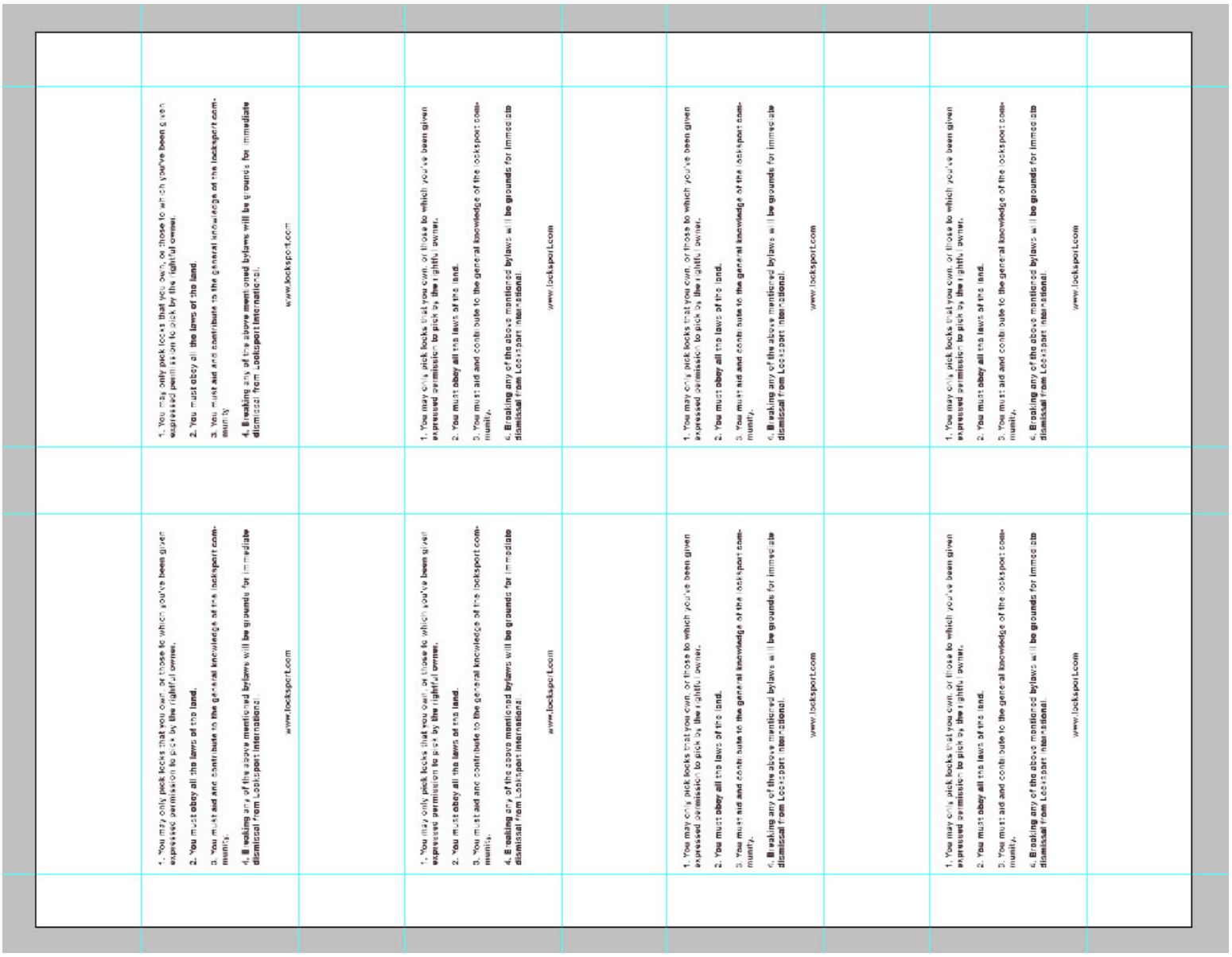
In the rest of the guide, I will use the template that I created for the organization Locksport International. This guide will explain how I use amateur techniques to create a high security membership card for members of my organization. Here is a picture of the template I have created:



Along with the membership card template, you will also need a few printer templates. You will want to create yourself a set of printer templates that allow you to print multiple membership cards on a single sheet; otherwise you will be wasting materials and time. The following is a picture of a print guide in Photoshop. The guides are measured so that exactly 8 membership cards can fit on the same page.



The other print guide lets you print the backside of the membership card.



Here is a close up on the backside of this template.

1. You may only pick locks that you own, or those to which you've been given expressed permission to pick by the rightful owner.

2. You must obey all the laws of the land.

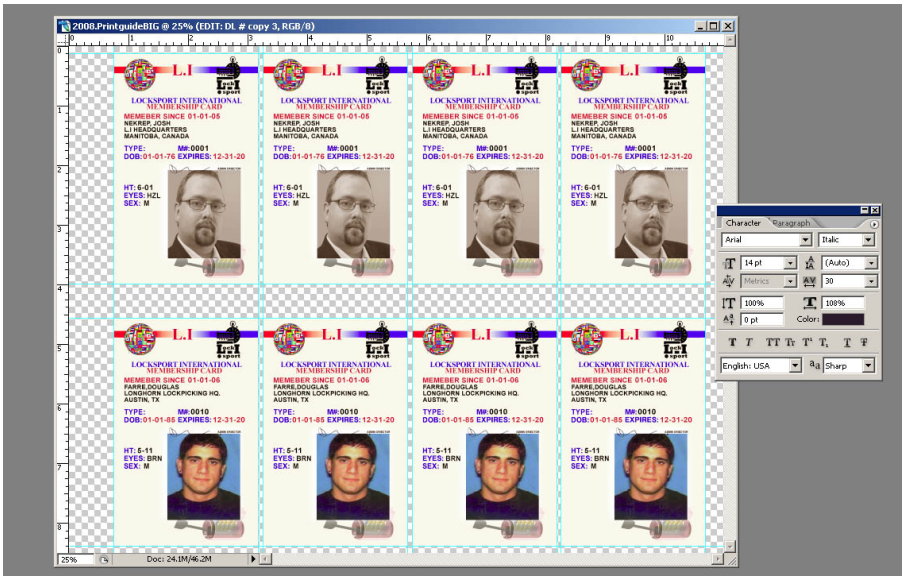
3. You must aid and contribute to the general knowledge of the locksport community.

4. Breaking any of the above mentioned bylaws will be grounds for immediate dismissal from Locksport International.

www.locksport.com

Above the first line we have left room for a magnetic stripe for extra security and for a data application. The magnetic stripe holds whatever data you choose (usually about the individual) on three different tracks. A track is just an allocation of space where data is held. If you were talking about memory for a computer, it would be like splitting your memory stick into 3 different sections with a permanent marker.

Now that we have both print guides prepared for both sides of the membership cards, we are ready to start our first batch. At this point we have prepared two sets of four identical membership cards on the print guide as seen below.



Next you must figure out your printer and ink type. Unfortunately it may not be as simple as you may think. You may have to spend many hours tinkering and testing until you have reached your desired results. Printing with Teslin is much different then printing with regular copy paper or photo paper. Teslin is highly porous, synthetic paper with superior adhesion attributes. It's also biodegradable. Teslin absorbs ink much more readily, and doesn't produce a glossy image as you may expect. That is why correct printer settings are critical in this application. Some recommended printer settings and Teslin types are recommended below (from www.brainstormidsuply.com):

PRINTER	PAPER	MEDIA TYPE	PRINTER SETTINGS
Canon S800	Inkjet Teslin	Transparency	Highest Resolution
Epson Stylus 800	Inkjet Teslin	Photo Quality Glossy Paper	Highest Resolution
Epson Stylus C82	Laser Teslin	Matte Paper Heavyweight	Photo RPM, Super MicroWeave
Epson Stylus Photo 2200	Inkjet Teslin	Photo Quality Glossy Paper	Highest Resolution
Epson Stylus Photo 820	Inkjet Teslin	Photo Paper	Photo 2880 dpi Color Management : OFF Edge Smoothing : OFF Epson Natural Color : OFF
Epson Stylus Photo R800	Laser Teslin	Matte Paper Heavyweight	High Speed : OFF Select Best Photo and Vivid Color Profile
HP 950C	Laser Teslin	Bright White Paper	Highest Quality
HP with pigment-based ink	Inkjet Teslin	T-shirt Iron-on	Increase ink dispersion a notch

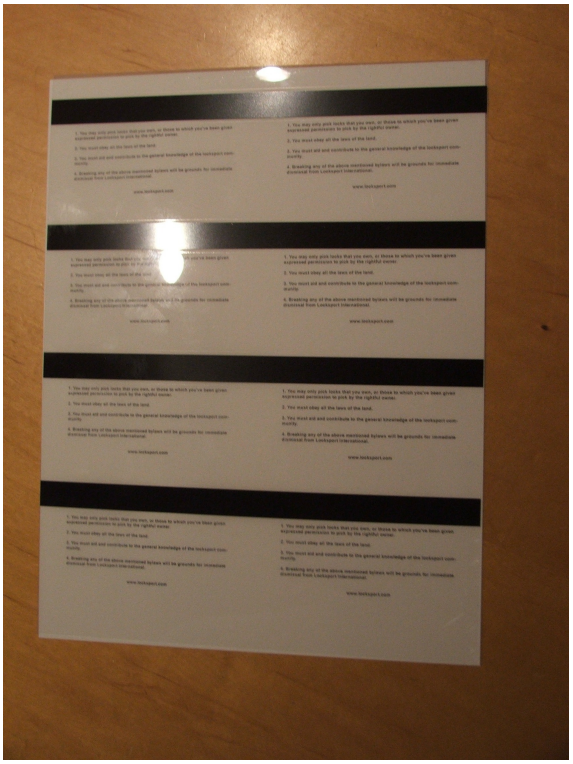
For our membership cards we will be using 10mil Laser Teslin 8.5x11. After printing the front of your identification cards, you are now ready to print the reverse side. Depending on your printer, you will have to reinsert the paper into the printer in the right orientation so the desired results are obtained. This is how we accomplish this:



Once both sides have been printed you must decide how you will proceed with your hologram application. So insert hologram process here. (see Part Three: Hologram)

Now that you have a working hologram, it is time to laminate! For our membership cards, we will be using 7 m i l Full Sheet 8.5x11 Clear Laminate Sheets for the front of the card, and the 7mil Full Sheet 8.5x11 Magnetic stripe Laminate Sheets for the back of the cards. When you put them together it will look something like this.







Getting this far has probably been a very interesting, time consuming, exciting, and frustrating experience. It's almost time to admire all your hard work. Things really start to come together at this point but there is still quite a bit left to go as it is now time to laminate your batch.

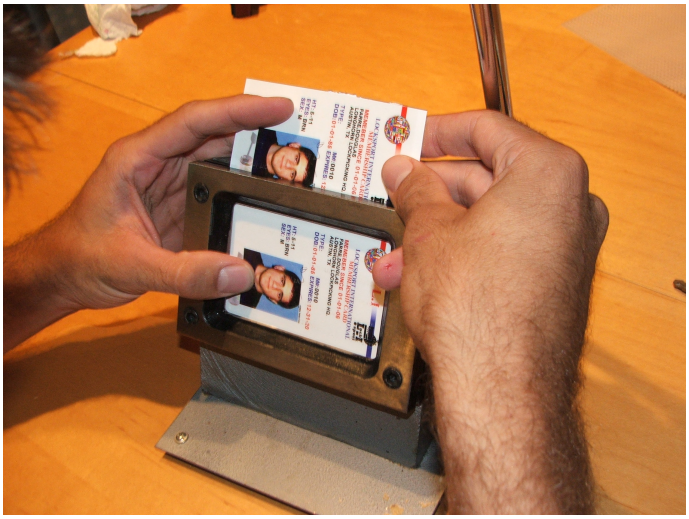
We aren't going to go into detail here concerning lamination as it is a pretty straight forward procedure. Since most laminators are different, it will be up to you to figure out how to fine tune the heat settings on your laminator. A common problem that occurs during lamination is bubbling and deformation. To prevent these things try lowering or raising the heat. Another tip is to always place the items being laminated inside a protective pouch. This will protect both the machine and your final products. You can create your own protective pouch by laminating two pieces of Teslin on one side only. Then, when laminating, place the laminated Teslin sheets on the top and bottom of your batch, this will act as a protective pouch and will prevent deformation as well.



The final step in the procedure is dye cutting. This step should be done with much care, as it will make or break your newly laminated cards. Never rush this part of the procedure, because if you mess this up, you will have to start all over.

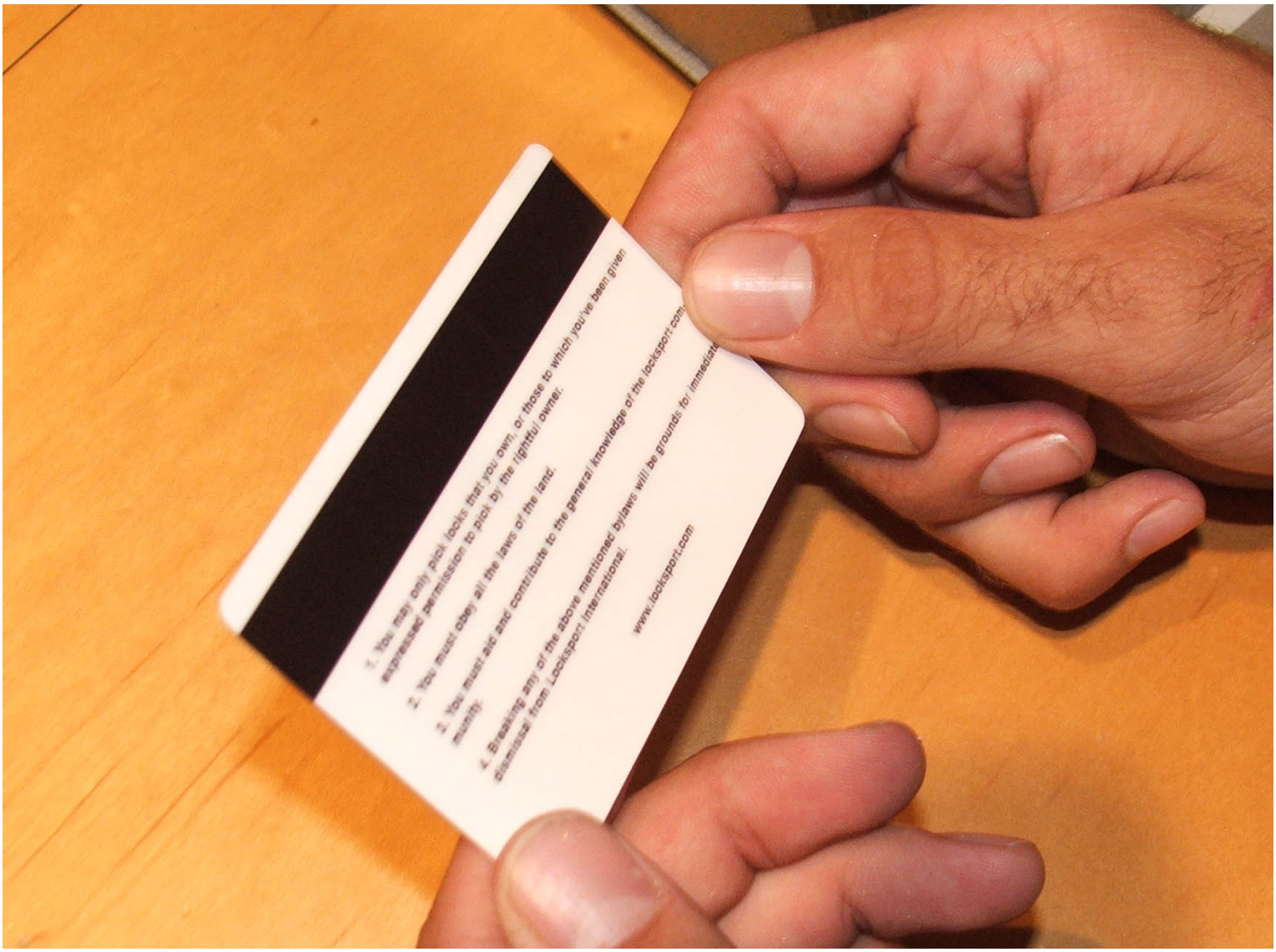
Start off by cutting the laminated batch into a workable size. In this example I cut two cards off of the main page, and cut them down so they fit inside of the dye cutter.

Next, place the uncut cards into the dye cutter and position them so they are ready to cut. This takes much practice, and there is no doubt you will mess up many times. Don't be to hard on yourself, it takes patience and patience to get it right.





Its now time for the last and final step; writing to the magnetic stripe on the back of the newly cut membership card.



To verify the magnetic stripe works, put your magnetic encoder into write mode and write all the necessary information onto the card with your choice of software. Then proceed to put the magnetic encoder into read mode and slide the card back through.



PART TWO: What You Need

Now that we have a little background we can begin to get more technical. If you have developed your own methods then please insert them when applicable. However, this guide is a result of many thousands of hours of research time. Every combination of materials from every supplier available was tested regardless of the price. Even inquiries were made to many large government contractors who manufacture many of the AAMVA regulated drivers licenses, regarding the types of materials used. If you follow my guide without any shortcuts, your results will be stunning; guaranteed.

It's about time we start talking about equipment. You're going to need *a lot* of equipment. Making ID's is about a 10 step process. After you do it about 150 times however, it starts to come naturally. If you're the artistic or obsessive type, you're really going to like it. For everyone else, you're probably going to give up. So if you think you are going to give up, then stop now. If you're not going to give up, then you will need a moderate amount of money. Let's start off with the printers:

Printer List

1) Compatible Inkjet Printer (Epson Stylus R800 Photo Printer)

If you have done your research, you will know that any Epson printer with DuraBrite ink is usually recommended in the identification card industry. This is because DuraBrite ink works especially well with Teslin. I highly recommend the Epson Stylus R800 photo printer. After experimenting with most of Epson's printer line, I have found this to always meet my expectations. Other printers that are known to work well with Teslin are the Canon S800, Epson Stylus 800, Epson Stylus C82, Epson Stylus Photo 2200, Epson Stylus Photo 820, and HP 950C.

Keep in mind that when choosing a printer it is extremely important to choose one with pigment based ink for Teslin based ID applications. Standard based ink, also known as dye based ink, has many characteristics that are not desirable for our application. Here is a chart showing you the difference between pigment based inks and standard dye based inks:

PIGMENT INKS	VS.	STANDARD DYE INKS
Particle based and does not dissolve completely in water.		Water based and does dissolve completely in water.
Very resistance to fading.		Fades easily.
Higher cost.		Lower cost.
Can print with laser Teslin, inkjet Teslin or Artysian synthetic printing sheets.		Prints only with inkjet Teslin and Artysian synthetic printing sheets.

2) Thermal Printer (Alps MD-1300, MD- 1500, or MD-5000)

This printer can only be found on eBay, as they do not make them anymore. It was introduced to the market about 15 years ago, and Alps Electronics took them off the market around 2004. In 2007 they stopped supporting these printers forever, so you can no longer get them serviced. A quote from www.alpsusa.com website says "As previously posted on March 31, 2007 Alps Electric (USA) Inc. no longer offers any support for the MD Series Printers models MD-2010/ 4000/ 2300/ 1000/ 1300/ 5000 respectively."

This machine will hook up to your desktop via an LPT printer port. It will be used to print full page holograms. If you decide you want to make holograms using the "Stamp Method" (we will discuss that later) then you will not need this printer. Expect to pay $400-$800 and don't be surprised if you get a DOA.



3) HP Inkjet Printer

This printer is optional and can be used to print UV ink onto your ID.

Must be compatible with HP51645a inkjet cartridges.

Misc. Equipment List

4) Laminator

Get a decent one. Preferably one with a temperature control and metal gears. It is essential that it can fit at least 8.5 inches across minimum. So to be safe at least 10 inches across lamination surface. Don't be afraid to spend between $250 and $450 on a laminator, as it is a very important piece of equipment.

5) Dye Cutter

This tool is probably the coolest. After your ID is laminated, this is the actual device that cuts it perfectly into ID size. If this doesn't make sense now, it will later. Buy the dye cutter from www.brainstormidsupply.com . You can buy the cheaper one for $390. Buy it sooner than later, as it takes longer to ship and is often on back order.

6) Magnetic Stripe Encoder

Used to make the ID "scan."

Stay away from EBay, as many are counterfeit.

Make sure it can write Hi-co and Low-co. Also tracks 1, 2, and 3.

Be prepared to pay around $600, possibly more.

7) Black Light

Almost all types of credit cards, security documents, and driver's licenses use ultra violet ink for security.

8) Airbrush (optional)

Advanced ID makers only. Will be discussed later.

9) Chocolate Covered Fuzzy Banana

This isn't a joke. This is an even layer spreading tool that will be able to spread fine particles out very evenly. This will be used when making the holograms. http://practicingperfection.7p.com

10) Scanner

Any image scanner will do.

11) Signature Pad.

A peripheral that plugs into your USB port that allows you to use a pen in the place of a mouse. Good for making signatures directly onscreen. If you want to sign a piece of paper, then use a scanner and scan the signature in instead, this will work too.

12) A copy of Adobe Photoshop

Or your favorite desktop photo editing suite. However, the guide will assume you are using CS2.

13) Computer

The computer must have some power. It must be able to handle multiple print jobs to several different printers at once and anywhere from 4 to 20 large Photoshop files open at any time.

It must have an LPT port for the Alps printer. Do not buy an USB to LPT connector + software package as the printer and printer software will reject this connection. It has to be a real LPT port.

Unless you've got loads of horsepower, this shouldn't be your regular computer. Build a new one with a lot of memory.

Usable Materials

14) 10mil Laser Teslin 8.5x11

Teslin is a plastic material that goes in your printer like printer paper. It absorbs ink well and bonds with the laminate glue making it a perfect material for identification cards. There are many different thicknesses and types of Teslin. After experimenting with 5mil, 7mil, 8mil, 10mil, and 14mil, we have concluded that 10mil is the best size for our application. After you become a little more experience, I recommend you switching over the Artysian 10mil material, as it has many benefits such as improved adhesion qualities and more brilliant colors. It is more money, however, so stick with the Teslin until you are ready. www.brainstormidsupply.com

15) 7mil Full Sheet 8.5x11 Magnetic stripe Laminate Sheets

This 7mil thick laminate sheet is used on the backside of our ID card. The black stripes you see are magnetic material that can be written on with a magnetic stripe encoder. www.brainstormidsupply.com

16) 7mil Full Sheet 8.5x11 Clear Laminate Sheet

This is the piece of laminate that goes over the front side of the ID card. We have experimented with 5mil, 5mil Matte, 5mil Lexan, 6mil Crystal, 7mil, 8m, 10mil nylon, 10mil polyester, 10mil clear, 10mil Matte, 10mil Lexan, 14mil. The 7mil from www.brainstormidsupply.com works with our combination of materials.

17) Perl-Ex Pigment Powders

For our application buy 1 gram of Interference Gold and 2 grams of Sparkle Gold.

Otherwise you will need to figure out your own design.

http://practicingperfection.7p.com

18) Alps Finish Cartridges

The Alps printer uses cartridges instead of ink. The finishing cartridges are clear and will be used to "lock in" the Pearl-Ex on the laminate when making the holograms. http://practicingperfection.7p.com

19) Green Ultraviolet Pigment powder

This is used to create the UV security feature that is present on most ID cards.

http://practicingperfection.7p.com

20) HP51645a Inkjet Cartridge

Filled with ultraviolet ink of your choice in color.

21) Isopropyl Rubbing Alcohol

Used for the airbrush hologram method.

22) Transparent base (water or acrylic based).

PART THREE: Hologram

Making the hologram is probably the most satisfying part of the whole operation. The quality of the hologram can make or break the ID. There are two main methods of hologram making; the first method is the "Alps Printer Method" and the second method is the "Stamp Method." After experimenting with both methods I highly recommend using the "Alps Printer Method." Here is a table comparing the two main methods:

ALPS PRINTER METHOD	VS.	STAMP METHOD
Expensive to operate!		Very inexpensive.
$400-$600 Printer + 15 Dollars per finishing cartridge		$25 Customized stamp at http://simonstamps.com
Less time consuming You can make 8 holograms at one time.		Very time consuming. Can only make a single hologram at one time. Tedious.
Near perfect holograms every time and if you mess up you don't have to throw away the Teslin, only the laminate.		Very easy to mess up and have to start all over. If you mess up then the Teslin must be discarded.
Not much mess to clean up.		Sticky mess to clean up.
Hard Ultraviolet Application		Easy Ultraviolet Application

Keep in mind there are also many other methods of producing holograms. Two more that I have found to work quite nicely are the:

1) "Silk Screen Method"

2) "Stencil and Air brush Method" – Not to be confused with the "Air brush Method" that allows you the print UV holograms on the Alps. The air gun has two functions it can be used for, so keep that in mind.

Since these types of methods are much harder to perfect, I will not go into as much detail as I will with the other methods. However it is important to point out that if you are able to perfect the "Silk Screen Method" or the "Stencil and Air gun Method, you may find the results superior to those of the Alps or Stamp methods.

Alps Printer Method:

What you will need:

Alps Printer
Perl-Ex Pigments (For our application you will need 1 gram of Interference Gold and 2 grams of Sparkle G-old)
Chocolate Covered Fuzzy Banana
7mil Full Sheet 8.5x11 Clear Laminate Sheet
Alps Finish Cartridge
Photoshop Hologram Template
Optional safety equipment include:
Gloves, Respirator, and Eye Protection.

I would like to start off by going into more detail about the Alps printer, as it is a very interesting machine. The Alps printer has many different uses such as micro dry printing, dye sublimation printing, photo printing, T-shirt transfers, decals and a lot more.

Some the great aspects of the micro dry/dye sublimination printer are:

Brighter Colors
The ink transfers from the ink cartridge to the paper and is instantly dry.
Water Proof and Smear Proof (these will be very important when printing our holograms)
Can print on a variety of different types of mediuma; Transparencies, Inkjet and Laser paper, decal paper, and laminates.

The only real problem with this printer is its total lack of speed. This machine is incredibly slow. Lucky for us, this won't be a real issue.

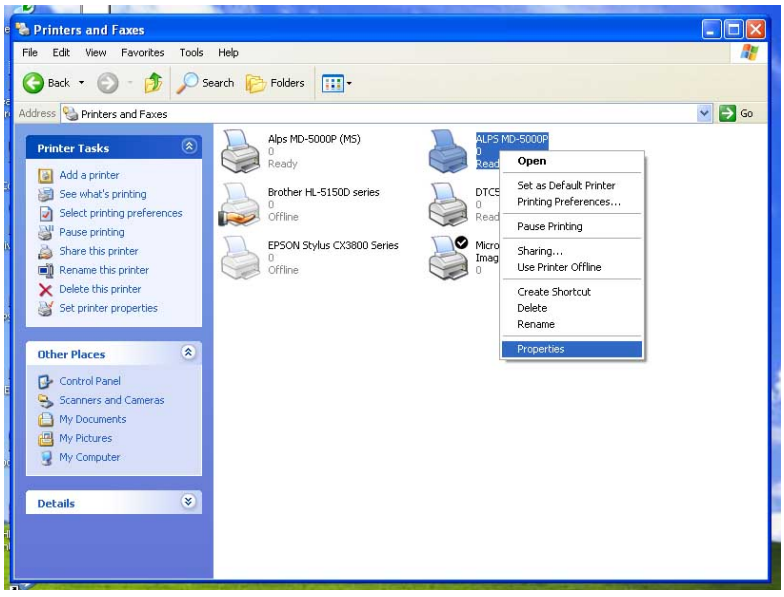
First, we must get our Alps working correctly. Start out by installing the printer driver and printing a test page. Do not install via the control panel, as your printer will not install correctly. You must install with the correct printer driver/software combination. You will most likely have a lot of trouble with your Alps printer but don't give up!



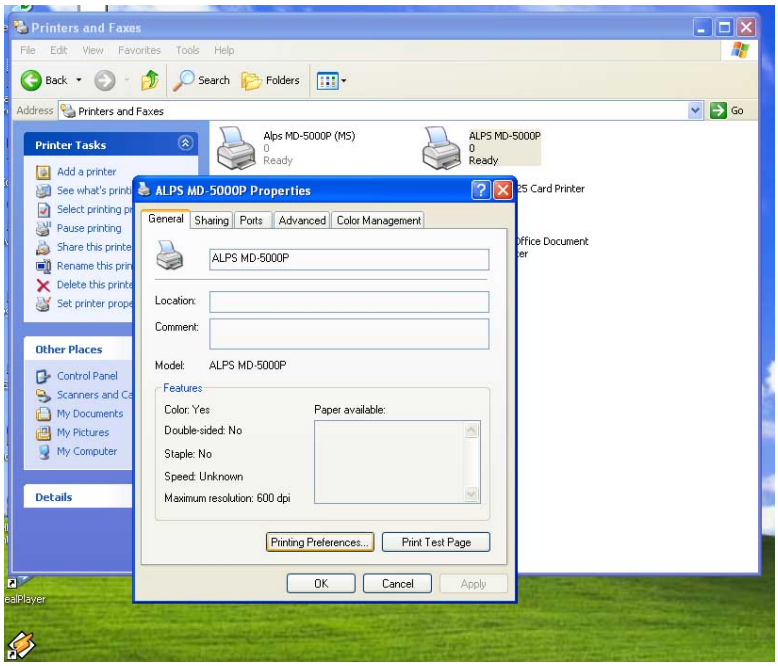
Driver Note:
Alps Electronics no longer provides the driver for this printer on their website. You must find the correct software/driver combination that is compatible with Windows XP. If you try to install the original Alps software on your 2000, XP, or Vista machine it will not function correctly. There is a single Alps XP Driver floating around out there that works for MD Models 1000, 1300, 1500, 2010, 2300, 4000, 5000, 5000p. This is most likely the one you will need.

Once you have the printer functioning, remove all the color cartridges from the printer and install a single Alps Finish Cartridge. Now we are going to configure the printer to use the finish cartridge next time it prints. Follow these steps:

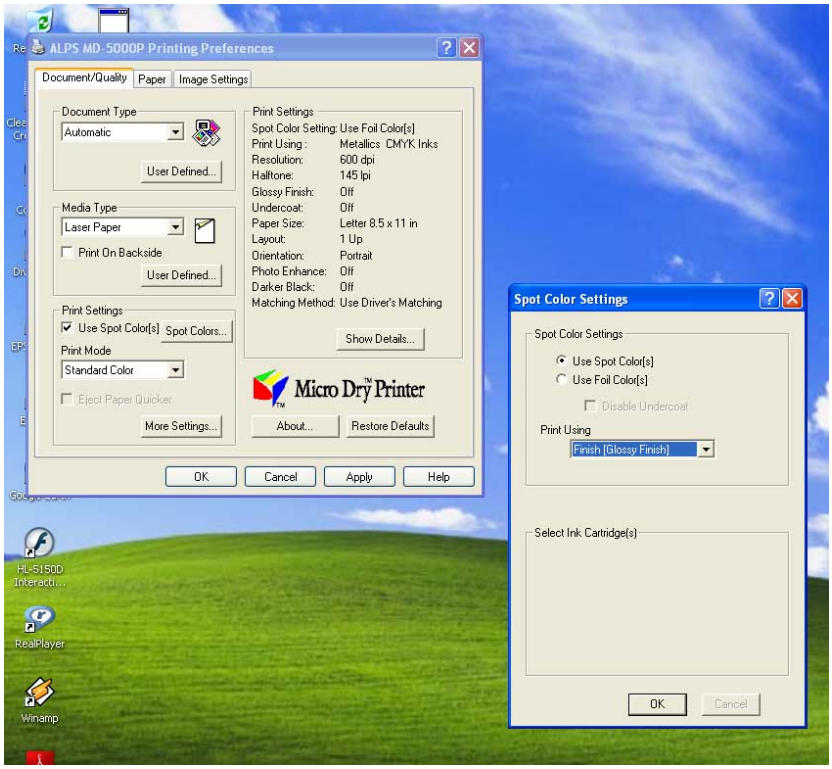
1) Control Panel -> Printers and Faxes -> Right Click on Alps Printer -> Go Down to Properties



2) Under the General Tab -> Click Printing Preferences



3) Under the Document/Quality Tab -> Click the Use Spot Color(s)

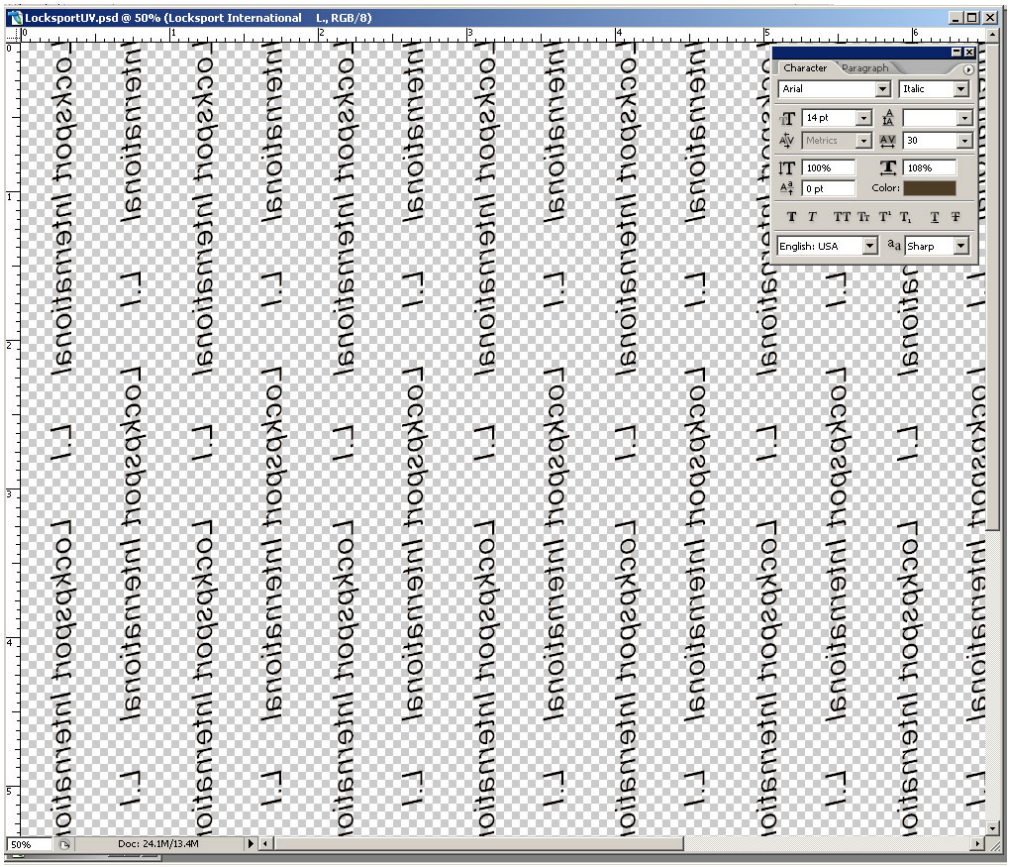


When the spot color settings window pops up click the "Use Spot Color(s) radio button". Next click the "Print Using" drop down box and highlight "Finish [Glossy Finish]". Click Ok.

4) Click the Paper tab -> Go down to Paper Source -> Click the "Manual Feed" radio button

Once the printer has been configured, it is time to create a holographic template. For example, a state's holograph is usually made up of the state's crest or seal. Often times it is even as simple as just the state's name repeated (like the Texas hologram). If you have to create your own holographic template, use your organizations seal or crest, and edit it to your own advantage. If you want to make your hologram the name of your organization, then it is just a matter of proper spacing.

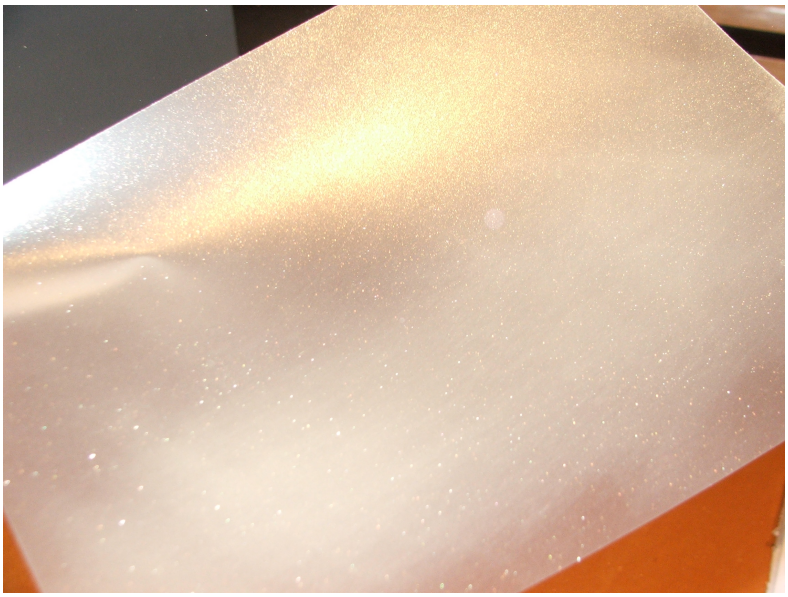
When you create the template file you will have to create the template so that during lamination the image is correctly shown. Here is a picture of a template file as seen on a computer monitor:



Notice how the text has been inverted so that it can be printed on the back of a piece of laminate. This is so when the laminate is turned over, it looks normal.

In order to take advantage of the Alps printer, we will need to apply a layer of Perl-Ex Pigment Powders. Take a mixing dish and mix 1 part Interference Gold and 2 parts Sparkle Gold. You may make your own combinations as you see fit. Use a brush or a Giant Chocolate Covered Fuzzy Banana to make a very light Peal-Ex glaze onto a piece of laminate. ALWAYS APPLY TO THE ROUGH SIDE OF THE LAMINATE. The rough side of the laminate is the side that has the glue on it. The glue will become activated during lamination. Make sure never to touch the rough side of the laminate with your fingers, otherwise you get unwanted oils and dirt on your flawless works of art.







Next, apply a very light glaze. It should be so light that when looking directly down onto the laminate you should not see any reflection of Pearl-Ex. Although, when you change the position to the light, you will see a very nice reflection. In the following picture you can see how when looking strait on to the image, all you can see is a whitish glaze. However, the top portion of the laminate that has been angled away from the light appears to be gold.

The next step would be to put the piece of laminate with the Pearl-Ex facing up into the Alps printer and print your desired template. After your template has been printed, you must wash the remaining Pearl-Ex off of the laminate. You can do this in the sink with soapy water. If you leave the Pearl-Ex on the laminate for too long without washing off the excess, it will become increasingly difficult to wash as the hours go by.

The Alps printer seals in the areas that had an image or text on them, so when you wash away the Pearl-Ex, an image will remain in holographic form! Unfortunately no pictures of the final product are included, as an Alps printer was not available during the making of this guide. However, I can assure you they are remarkable.

Stamp Method w/ Ultra Violet:

What you will need:



Customized Stamp in the shape of your hologram. (try www.simonstamp.com)
Perl-Ex Pigments (our application will need 1 gram of Interference Gold and 2 grams of Sparkle Gold)
Transparent base (water or acrylic based). This product is usually used for screen printing but can also be used for mixing acrylic inks etc.
Aluminum Foil.
Toothbrush (for cleaning the stamp)

Here are some pictures of custom stamps that were created at www.simonstamp.com. They allow you to create custom graphic or text stamps that are perfect for hologram production.



The Process

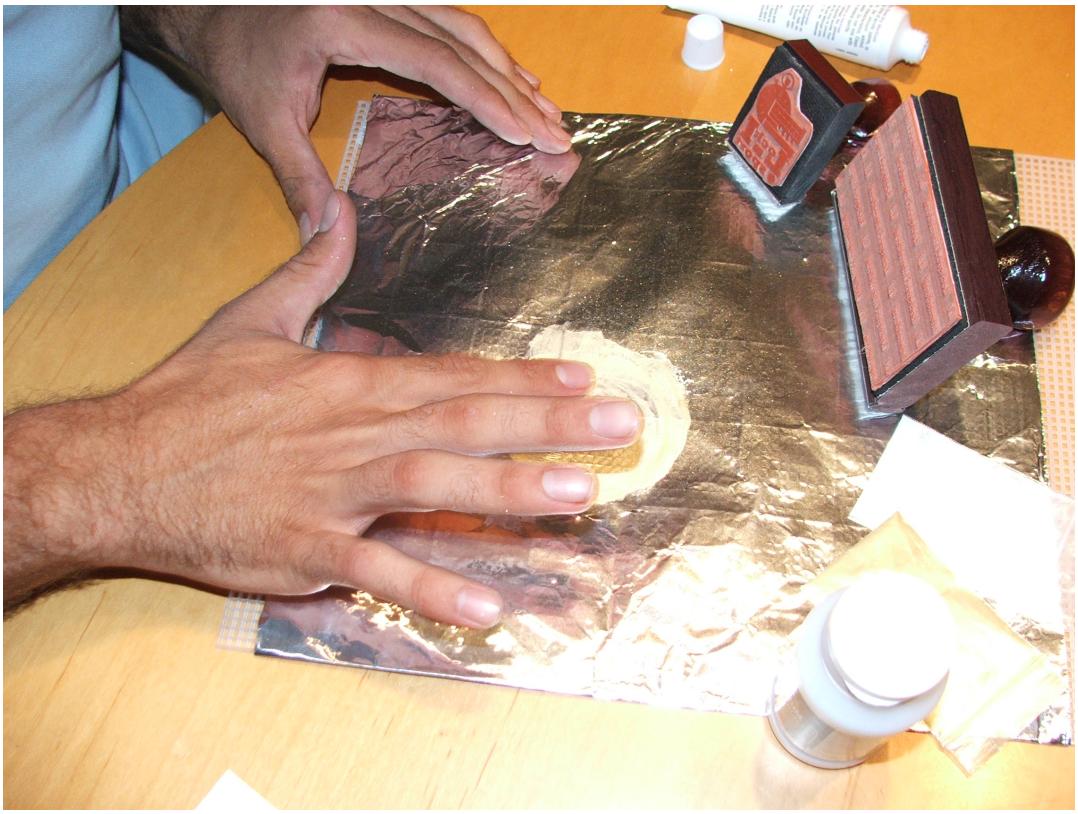
Now that we have all your materials ready, we can begin.

1) Start by mixing the 2 grams of Sparkle Gold, 1 gram of Interference Gold, and 1 gram of Green UV pigment powder. If you do not have those exact amounts then it is just 1 part Interference for every 2 parts Sparkle.

2) Next lay out a square piece of aluminum foil on a flat surface.

3) Place 1-5 drops of transparent base in the center of the aluminum foil along with ¼ of a teaspoon of Pearl-Ex mixture.

4) With your finger, in circular motions quickly mix the two substances together until homogenized. You must work fast. The base will dry!

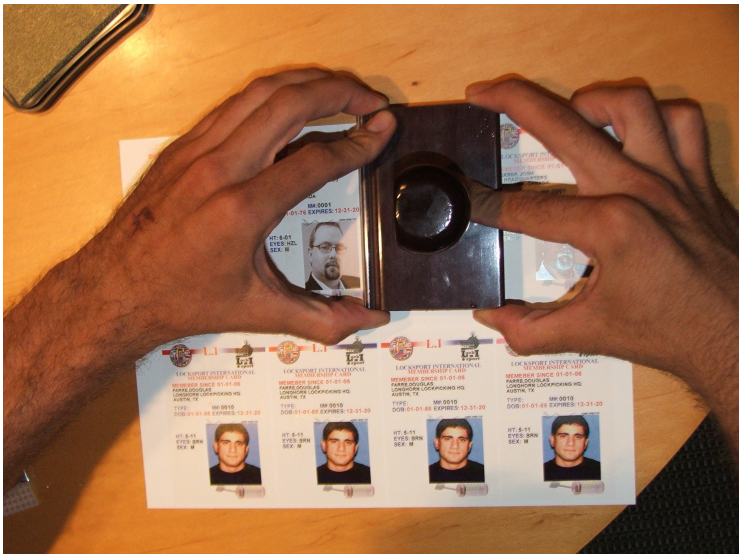


5) Now for the tricky part. With your finger again, smooth the mixture over a large area of the aluminum foil extremely thin. DO NOT go over the same area with your finger too many times; otherwise you will cause that area to become too dry. It must be very, very thin, but still wet.

6) Before the mixture becomes to dry, place the stamp lightly in the center.

7) Move the stamp over to the front of the Teslin, and gently stamp it onto the front of the already printed card face. (Apply to the Teslin before it has been laminated or dye cut, but after the graphics have been printed).

Not satisfied? Practice! Also, for a nice surprise go into a dark room and shine your UV light onto your new hologram.





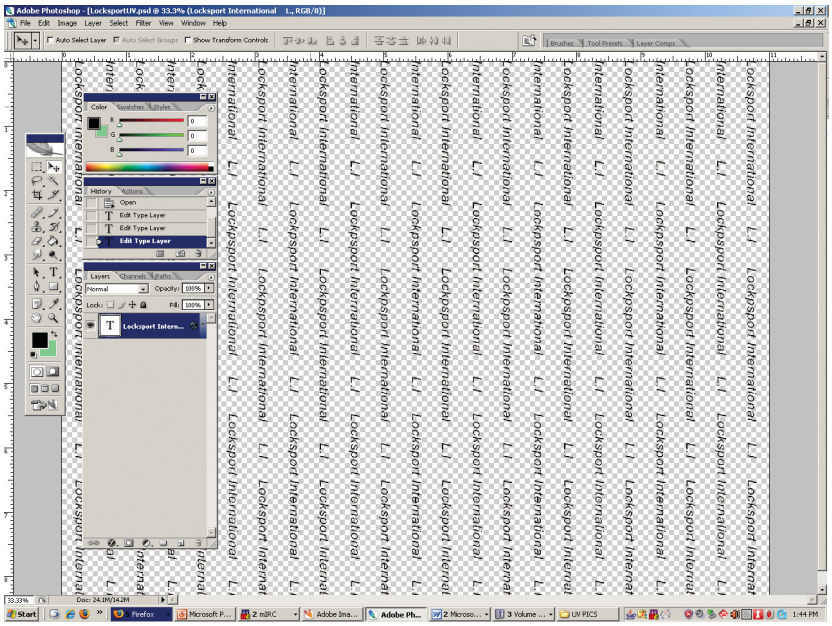
Silkscreen and Stencil Methods:

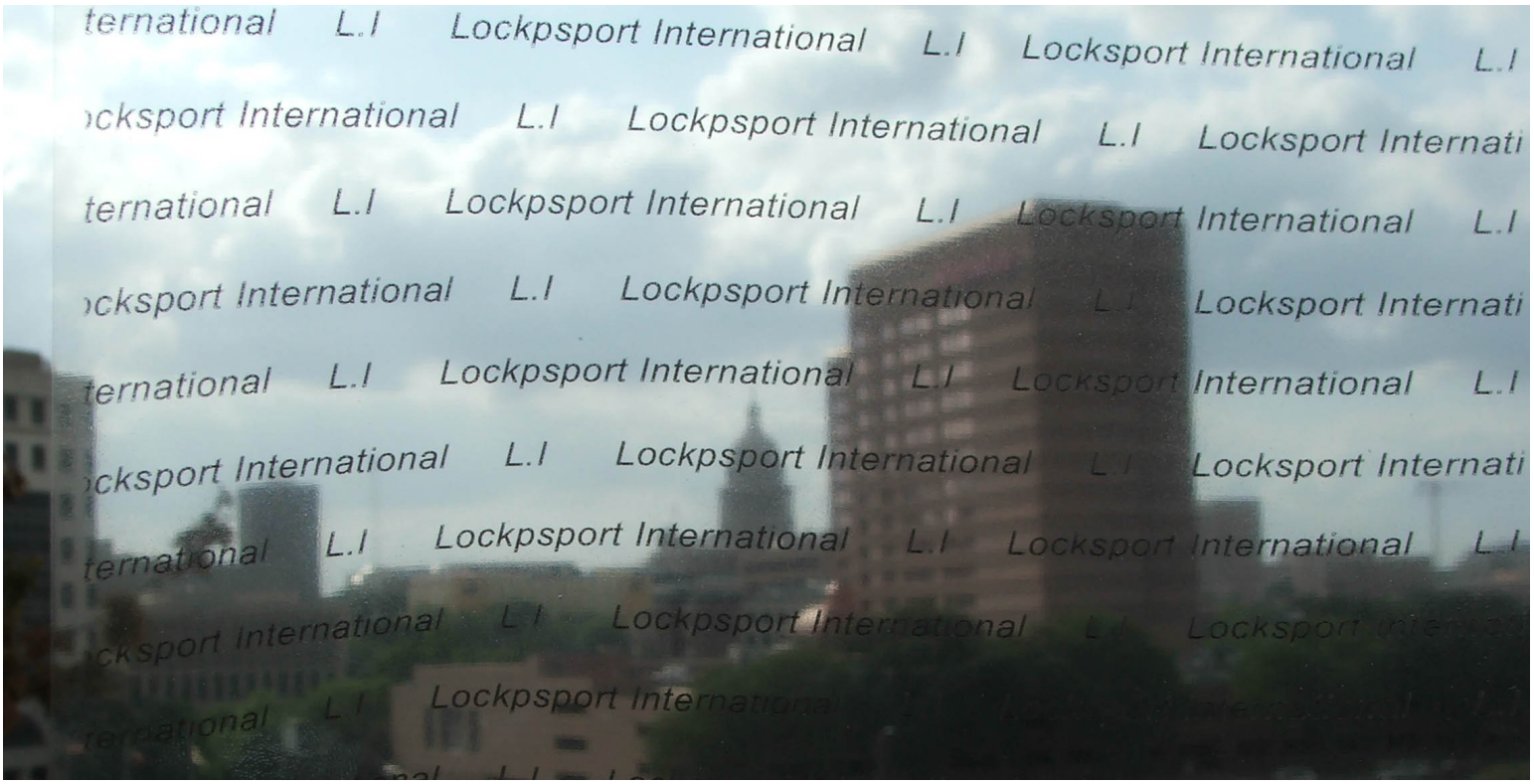
What you will need:

Regular Laser Printable Transparencies
Your choice of silkscreen products (PhotoEZ recommended for beginners)
Hologram Template

The Process

1) Print the hologram template onto a piece of Laser Printable Transparency.



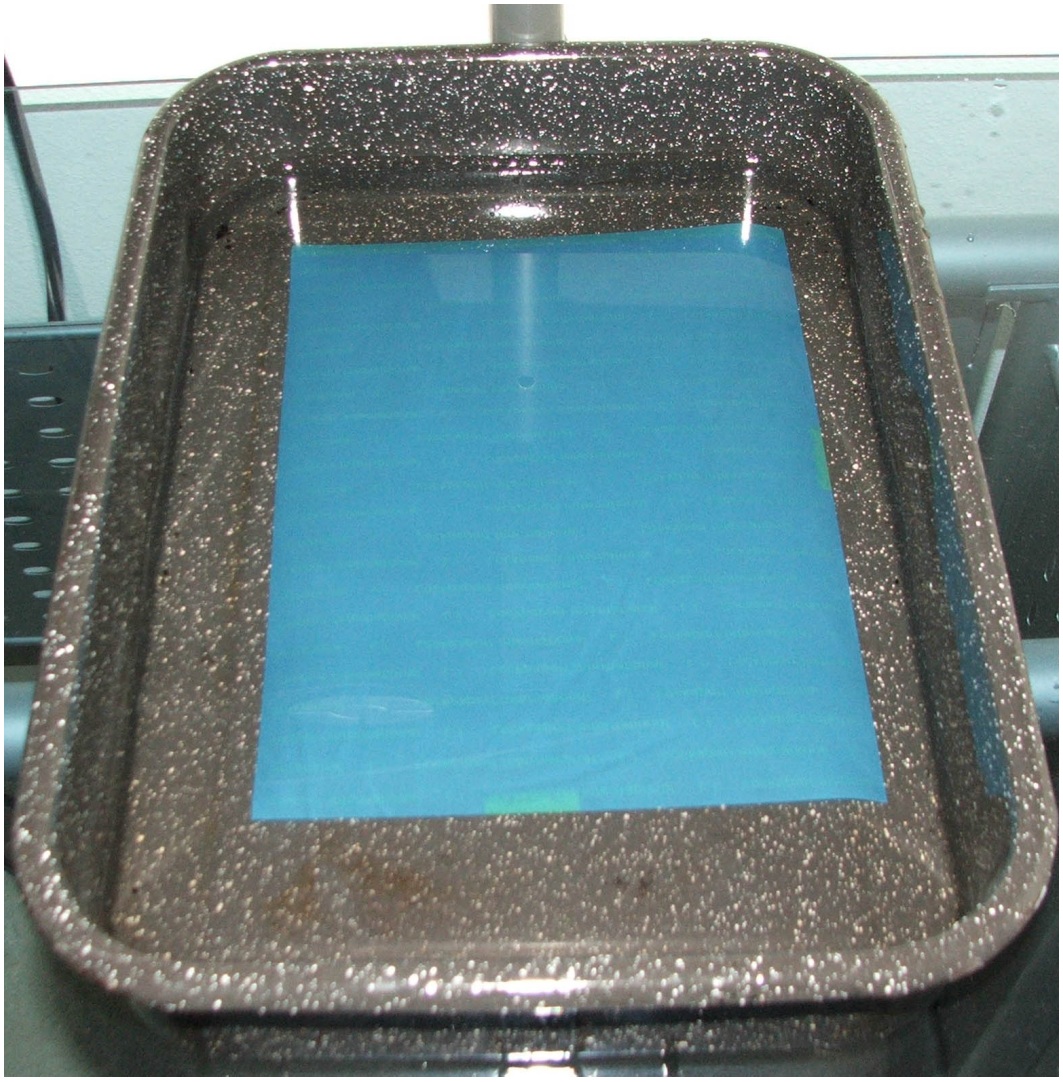


2) Place transparency on to the PhotoEz exposure sheet and place in the sun for allotted time period. Follow the directions supplied by your products provider.

3) Take the PhotoEz exposure sheet and let it soak in tap water for 15 minutes.

4) Scrub sheet with toothbrush or brush until the unexposed areas become clean.

5) Now you have a new screen/ stencil which can be used in the same manner a screen printer would apply paint to a t-shirt. Instead of a t-shirt however, you would be applying the paint directly to a piece of ready to be laminated Teslin.



PART FOUR : Advanced Hologram and Ultraviolet Method

UV Images Via Pigment Powder– by Anonymous

UV images via pigment powder applied to letter sized laminate sheets by Alps md-1300/finish cartridge method:

Get an Alps md-1300; far superior to the md-1000 or md-5000. Print a sheet of your desired designs onto plain paper. Remember to flip the sheet in photoshop horizontally before you print. (so they will read backwards) This is because you'll be printing on the adhesive side of the laminate. Once it's sealed it will read the right way. Now tape the corners of the sheet to your desk or workspace taking care to ensure the sheet is completely flat. Now lay a letter sized sheet of laminate, adhesive side up, over top of it and tape the corners to your desk in the same fashion. It is important that the left side and top side align with the sheet below. But the right side and bottom are ok if not perfectly aligned. Now apply a smooth, even amount of powder onto the laminate in the general areas where the page below is printed with your designs. Then using a flat top brush spread, or smear if you will, the powder into a nice 'even' shellac over the print below and a bit extra just to be sure. Most importantly, you want to see consistent groupings of powder on the laminate sheet before sending it through the Alps printer. Not clumps or wads.

The final step is to send the laminate sheet through the Alps, and print the same designs as the sheet of plain paper below was printed in black. Only this time you set the printer to print in single color mode using only the finish cartridge. Then wash the excess powder off of the laminate sheet with warm water and something soft. No need to be gentle really. The powder under the areas sealed by the finish cartridge are there to stay. And even though the powder is visible on the laminate at first, it becomes transparent upon lamination. However, under UV incandescence, the designs fluoresce brilliantly and evenly throughout. Magnificent to behold.

Keep in mind that Alps printers were not designed to be used this way. However, they seem to have a high threshold for punishment, thankfully. You will want to clean the printer after every session though. An air duster is crucial. Also, print a couple of sheets of your design with a standard ink color religiously following each session as well as before switching from one color of powder to another."

-Anonymous (The author of this would like to keep his identity secure)

Airbrush Method of Pearl-Ex and UV Pigment Application:

What you will need:

Pearl-Ex Pigment Powder mixture.
UV Pigment Powder.
Isopropyl alcohol.
Laminate



The Process

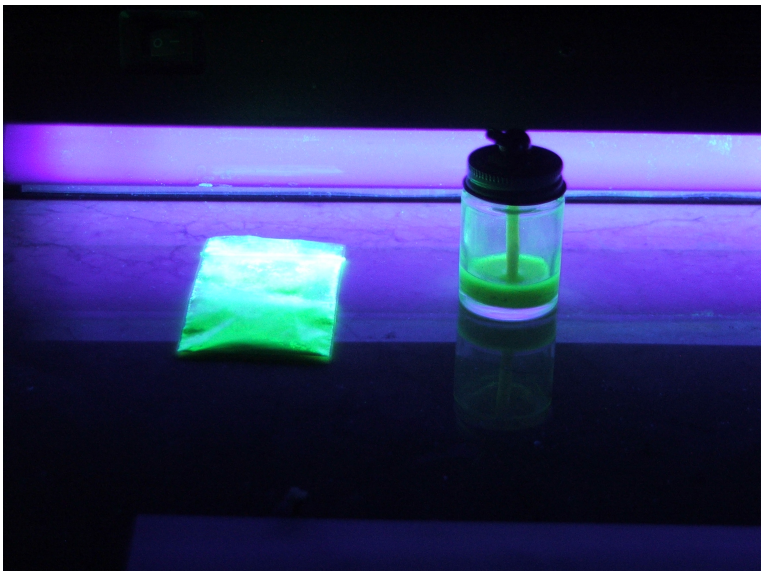
Now that we have all your materials ready, we can begin.

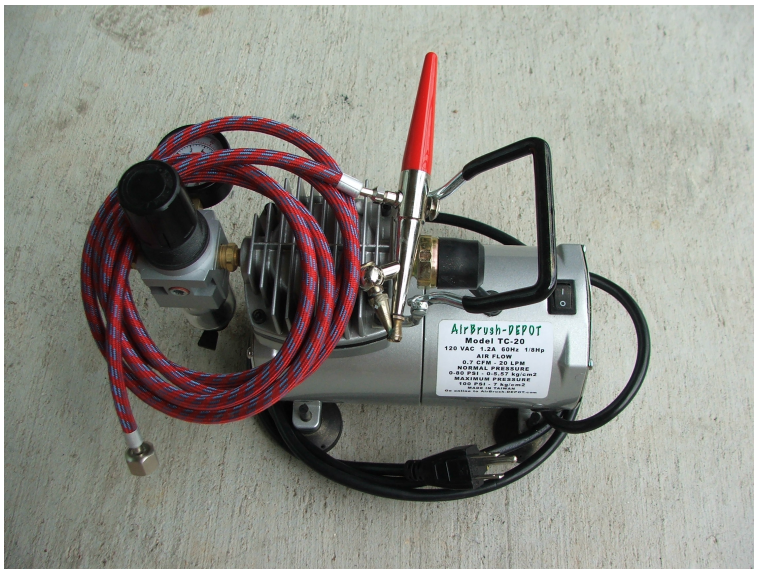
1) Start by mixing the 2 grams of Sparkle Gold, 1 gram of Interference Gold, and 1 gram of Green UV pigment powder. If you do not have those exact amounts then it is just 1 part Interference for ever 2 parts Sparkle. The best part of this process is the fact that we get to use the UV Pigment Powder. Under normal applications, use of the pigment power without using an airbrush gives us very poor results..

2) Put your mix inside the paint reservoir, and fill to the brim with isopropyl alcohol. The pigments and the alcohol will not homogenize, so constant shaking is necessary before and during application.

3) Go into a dark room and turn on the UV light. Spray an even coat of the mixture onto a piece of laminate and set it out into the sun for over 1 hour to dry.

4) Finish the hologram via the Alps Printer Method as stated above..





Invisible UV Ink Application – by Anonymous

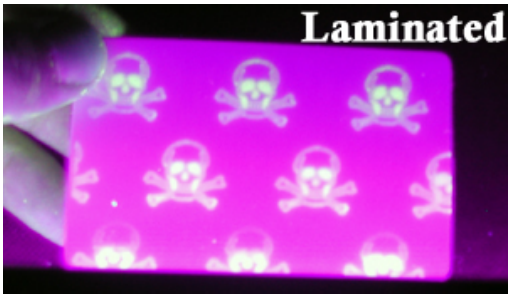
UV images via invisible ultra violet ink applied with an HP printer compatible with HP 51645A inject cartridges.

You may purchase everything you need for this application at http://practicingperfection.7p.com.

"First we'll start with a couple universal tips. #1. It is recommended that you clean off alcohol based, and other solvent based, ink carts print heads with an alcohol prep pad or a q-tip dipped in alcohol before each session. And for water based ink carts, clean off the print heads with a q-tip dipped in water before each session. Never use alcohol on a water based cart, or water on an alcohol based. If you do, you'll have crappy prints from then on. Don't press too hard when doing so, just light brisk strokes. #2. If it is leaving streaks, adjust the ink flow and or dry time to a lower setting. #3. If #2 doesn't work, try propping the cart up in the position it would be in when installed in the printer while leaving the print head tape and cartridge clip off for 24 hours. If this doesn't solve the problem, take off the print head sealing tape and cartridge clip and leave it propped up for another 24 hours. If there are still streaks, but there is noticeable improvement, chances are good that it will correct itself after a short time. If the streaks are still just as bad or worse, please send that cart back for a replacement.

For the porous blue and porous white carts, you should have nothing but great results with any setting combination. And you are free to run the cleaning cycles, as well as the priming cycle as you feel necessary.

With the porous yellow carts you should get great results with any flow and dry time settings. Feel free to run the cleaning cycles as you feel necessary, but avoid the priming cycle 'if possible.'



With the porous red and porous orange carts you may need to turn the ink flow and/or dry time down to avoid occasional streaks. But do try it all full throttle as it will produce a brighter print. Double passing may be necessary to achieve desired results. Cleaning cycles may be run 'if need be' but avoid running the prime cycle 'if possible.'

With the water based yellow carts set your ink flow and dry time setting to full blast as a rule. Run the cleaning cycles 'if need be' and prime if necessary. Also is a good idea to store 'upside down' when not in use. A short and brisk shake before use may be beneficial, only as needed though.

With the dye based yellow carts, both 100% pure and 3-1, set the ink flow and dry time settings to full blast as a rule. Avoid running the cleaning cycles until 'absolutely necessary' and NEVER ever run the prime cycle. If the prints are not printing in certain little areas of the page repetitively, don't worry. It will correct itself after a few prints. Simply adjust to the handicap until it's no longer an issue.

Here is the procedure for fixing flow issues using the orange fill tool pictured to the right. When attempting to correct the issue, start by flipping the cart upside down with the print head up. Then dip a sponge tipped q tip in the purest alcohol you can scare up. Then gently glide the tip of the q-tip across the print head in the direction of the grain. (little parallel lines) But while gliding it across, twist the tip in a counter clockwise fashion (if you're right handed). Then wipe or blot the tip of the q-tip off on a paper towel 'before' executing another pass. Do this a few times and then place into the orange tool. Keeping the cartridge upside down, placed in the tool nice and snug, insert the tip of the syringe into the little hole located on the tool. Make sure that there is no air inside the syringe. Now SLOWLY and OBSERVANTLY pull up on the plunger and the ink should start to bubble and spatter a bit into the syringe. Continue to pull, maybe even rotating the tip of the syringe counter then clockwise a couple times to make sure there is no more air lurking inside, until you notice that there are no more bubbles but just a steady stream of ink exiting the cart. Then stop and remove the cart from the tool. DO NOT flip the cart back to normal upright position before removing the syringe or the cart from the tool! Now repeat the entire q-tip & alcohol process again with the cart still remaining upside down. NOW flip the cart over and slap it into your printer and print a test page. If the test page print is less than desirable, follow up with the cleaning cycle and then the prime cycle if necessary. If the prints look good after the cleaning or intermediate cleaning, refrain from priming as it can 'sometimes' complicate an already satisfactory situation. A small percentage of the time really...but as the old saying goes...if it ain't broke...you know the rest. 8^)"



-Anonymous (The author of this would like to keep his identity secure)