MORPHIUSDISC MANUFACTURING ART TUTORIAL

Welcome to the MorphiusDisc Mfg tutorial, which should help you get started on the right foot preparing your project for manufacturing. This tutorial is designed to help you avoid costly errors and production snags that could delay your projects completion, and it should help to ensure that your finished products are of the highest possible quality.

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1. HOW TO SUBMIT YOUR ARTWORK

a. If you are not a designer and/or have little familiarity with creating artwork on a computer, it may be vastly more simple for you to allow us to create your artwork at Morphius from your supplied text and pictures. While this will add cost to your project price, you can rest assured that the work will be done promptly and professionally, and that your finished product will capture the look and feel that you are searching for. Many people who call themselves designers are unfamiliar with the process of creating artwork for CDs or cassettes or vinyl records, and enlisting them to help you can sometimes cause delays and less-than-optimum results.

If you do have familiarity with computer software for desktop publishing and image creation/manipulation—and a little patience—then this tutorial can help you to submit effective artwork to us on your own.

b. If you do choose to supply your own art files there are several ways to do so.

We can accept files on CD or zip disk. If you suppling files on disk then please mail the disk with your order form, master, and deposit.

You can also supply files electronically either through email or FTP. If supplying files through email, the files must be under 10MB. Please contact your account rep to receive an email address to send the files to. All files over 10MB must be sent via FTP if you are supplying files electronically. Please contact your account rep for FTP log-in address and instructions.

c. All submitted layout files and orders, must be accompanied by our "Pre-Order Checklist" and a hardcopy printout. The checklist verifies that you have followed our instructions to ensure art is set-up correctly and supplied properly. The hardcopy printout gives us a reference if we have minor problems with the files.

2. PLATFORMS & PROGRAMS

PC OR MAC

We accept artwork submitted in both the PC and MAC platforms, though we prefer MAC if you have the option of using either one. Several software packages for the PC platform have troublesome idiosyncrasies, so please call us prior to beginning a layout design using the PC platform with any program other than Quark/Photoshop/Illustrator/InDesign. Any PC layout work which is submitted must be accompanied by a reference proof of some type which shows the final form of the text.

SOFTWARE WE ACCEPT

ACCEPTED: QuarkXpress, Adobe Illustrator, Adobe Photoshop, Adobe InDesign.

NOT ACCEPTED AT ALL: Microsoft Publisher, CorelDraw (must supply files as .eps files instead instead of native files), Macromedia Freehand (must supply files as .eps files instead of native files).

NOT ACCEPTED AS A FINAL LAYOUT BUT ACCEPTED IF SUPPLYING COMPONENTS FOR US TO LAYOUT: Microsoft Word, or any text similar program.

If you do not have access to a layout program that we can accept, or if you prefer to let us worry about making sure the layout looks good, you are welcome to submit your text using word processing software such as Microsoft Word, Word Perfect, Simpletext, ClarisWorks, Appleworks or using another program that can save using text format. You are also welcome to send us an email text message that

includes all the type that you want. Combined with sending us photos or scans of images that you want to use, this art submission method can be a fastest and most cost-effective way to get the job done with a minimum of hassle.

If you are considering or have started using Microsoft Publisher, Powerpoint or 'any cheap label maker CD layout software package available at places like Office Depot' to create your artwork, please stop right away….While these programs may be great for printing reports on laser printers, preparing slide presentations or printing quick CD labels and inserts at home, they will not work for this purpose, and we cannot currently convert them to something that will work (We have yet to hear about anyone who can).

If you are setting up the layouts yourself, you will get the best results if you use either QuarkXpress, Adobe Illustrator, Adobe Photoshop or Adobe InDesign. They are considered the industry standards, and they are the most reliable and versatile programs to use. Furthermore, any necessary corrections to layouts created with either of these will be easy and quick to complete—as well as inexpensive if we are completing them for you. If neither of those is available, Adobe Illustrator or Macromedia Freehand are also effective, but require slightly more expertise.

Other programs such as CorelDraw or Freehand may also be used, however they are not specifically addressed in this tutorial. Although we do not accept files submitted in the native versions of these programs, Freehand and Coreldraw layouts can easily be saved as Illustrator files (the .ai format or as .eps).

Adobe Photoshop is a very important program to use for your image creation and manipulation, but it can also be used for layout work if there are no other available options. We do usually suggest that text is set in a layout program such as Quark, Illustrator or InDesign, but you can also set your text in Photoshop. Please keep in mind that your text might not be as crisp if set in Photoshop as opposed to a layout program.

3. CREATING AND SAVING YOUR IMAGES AND PICTURES

PHOTOSHOP

Adobe Photoshop is virtually the world standard for image creation, manipulation and export to page layout documents. It is extremely effective for anyone attempting to create their own artwork. By using Adobe Photoshop and following these guidelines you can ensure that your images are ready to be imported by a page layout program or used by us to complete your design work. If you are scanning the images yourself, you need to make sure that you are using a suitable resolution for offset and screen printing.

RESOLUTION/DOTS PER INCH

For any images that are going to be offset printed (i.e. your booklets, tray cards, folders, catalogs, brochures, stickers, offset print posters, or high resolution on CD printing, we recommend that you use images of 300 dpi, at actual size. What this means is that if you are scanning something that will be used at twice the size of the original picture, you need to scan at 200% of actual size and 300 dpi. Some scanners do not allow you to change the percentage of actual size when you are scanning, so if this is the case you should simply increase the dpi of the scan (i.e. 600 dpi if you want to print the image at twice its original size).

Once you have scanned your images or gotten someone else to scan them for you, you need to prepare them to be imported into one of the page layout programs mentioned above. To do so, first open the images with Photoshop.

COLOR MODE

Most image scanners use RGB mode, since that is the method by which monitors display color, but RGB color mode cannot be used for either offset or silkscreen printing and must be converted. To convert your images, select MODE from the IMAGE menu and convert each image to either GRAYSCALE (for B&W printing) or CMYK (for full color printing). When converting to CMYK it is likely you will see a slight shift in color or even a significant one, since the way that your monitor displays colors is very different from the way colors are printed onto paper. After converting the color mode to CMYK, you may want to adjust the color appearance of your images. Photoshop provides a wide variety of methods for doing so, but these are not covered in this tutorial.

NOTE: if you are using a program other than Photoshop for your image creation/preparation, it may not give you the option of converting to CMYK or Grayscale. If this is the case, you should contact us about how to proceed in the most effective way possible. It is likely that we will be able to convert your images effectively for you, but there may be charges involved to do so. Many programs that do not allow the CMYK or Grayscale mode are also limited in their ability to set image resolutions appropriately, so be aware before proceeding that mixed results may occur. Always ask us if in doubt….

IMAGE SIZE

Once you have set the color MODE correctly, you should verify that your scanner or whoever provided the image to you has sized it correctly. To do so, select IMAGE SIZE under Photoshop's IMAGE menu, which will show you the current size of the image. You should see the current size and resolution listed. If the size is too low, it means your image is not really suitable to use for offset printing. There are several ways to correct this. The first and best way is to rescan the image, either by setting the resolution or sizing higher, or finding a scanner that can. Most scanners will allow you to set a custom resolution and size, so if yours cannot, the quality may be insufficient for these purposes.

In other situations it may not be possible to rescan the image. Don't worry about it too much, there are ways to make the image look pretty good anyway. The easiest way is for you to send it to us and have us do it, although there are limitations to how good a picture can be made to look if the dpi starts out too low.

If your source for this picture is the internet (since images posted as jpgs or gifs on the net ar usually at 72 dpi, which is 4 to 5 times lower resolution than what is recommended for printing), then you might be in trouble. Although we can work wonders here, there is a limit to what can be done with most images that come to us at 72 dpi.

If you are an experienced Photoshop user, you are welcome to try to fix the image by resizing it to an appropriate image resolution by changing the setting in IMAGE SIZE. If the image resolution is too high, check the box that says RESAMPLE IMAGE SIZE and just decrease the resolution to 300. Your results will usually be quite good. Or if the picture size is too big but the image resolution is not high enough, uncheck the RESAMPLE IMAGE SIZE box and type 350 in the box that says Resolution. The sizing will change automatically to show you at what size the image can be displayed using 300 dpi, and this will not affect the quality of the image.

If, on the other hand, the image resolution is too low, check the RESAMPLE IMAGE SIZE box and try increasing it to 300. Photoshop will guess what the pixels that it adds should be, and often the results will be quite good. When using this method, you can experiment using other Photoshop features such as UNSHARP MASK and GAUSSIAN BLUR, and then finishing by changing CONTRAST/BRIGHT-NESS or re-SHARPENING your image. Good luck with your results.

4. CHECKING IMAGE QUALITY, SPOTTING MOIRÉ, SAVING AS TIF

IMAGE QUALITY

When your image seems ready to use, or after significant work that you want to test the results of, you should examine the picture using the view option which says ACTUAL PIXELS. What this will show you is a magnification of the image to the point that the monitor can show you the level of detail that the image actually has. If you've done the previous steps properly, when you click onto ACTUAL PIX-ELS, the image should be displaying at 400% of actual size or higher. When you are viewing the image at this magnification, you will probably notice some inconsistencies in its appearance unless your scan is of extremely high quality, but the image should still look relatively good. If it does not, then whatever you did before may not have worked...

SPOTTING A MOIRÉ PATTERN

If you notice crisscross patterns or checkerboarding or circular dot patterns of discoloration in the image at this view, it probably indicates the presence of something called moiré, which can occur when scanning an image that was previously printed using the offset process (i.e. a picture from a book or magazine or newspaper). While these problems will not be likely to show up in printouts made at home using an ink jet printer (or even most laser printers), they are causes for concern, because they will almost certainly show up when we offset print your image. If you do notice moiré patterns in your images, you can either have us correct them as much as is possible here, or you can attempt to use some of the techniques above (UNSHARP MASK or GAUSSIAN BLUR, etc.). Moiré problems do not usually occur using scans of actual photographs, but beware of them if you are taking images that have been printed before using other methods like offset or silkscreen.

SAVING TIFF FILES

When you have verified that your Photoshop images are OK, save them as TIFs. Do not check the LZW compression box, as it may cause postscript output problems.

5. TEXT IN PHOTOSHOP

Text in Photoshop, while often of reasonable quality, is not necessarily recommended, as it often will not appear as crisp on your final product. If you must create your text in Photoshop, try to stick to large font sizes (do not use a font size below 7 to 8 point) and fonts that are relatively clear, and consider increasing your image resolution to 350 dpi or higher, as this will preserve some of the smooth vector curves that the font would normally have.

If you are worried about the clarity of your Photoshop text and can afford some minor extra charges, you may want to just submit your images without text and submit the text separately in a word process-ing program that you are comfortable with, and send it along with instructions or a mockup of how you want it to look.

If you have other questions about the best way to submit text or use special fonts without having access to a page layout program, please contact us by phone. Illustrator can be used to create pic-ture-perfect and customizable text if QuarkXpress or InDesign is not available.

6. IMPORTING IMAGES INTO YOUR PAGE LAYOUT

THIS STEP IS RELATIVELY EASY, AS LONG AS YOU KEEP A FEW SIMPLE RULES IN MIND.

FIRST, always keep all the final images that you have created in a single folder, and name the so you know which is for what section of your artwork. that way, when it comes time to save everything onto a disc, it should be relatively easy and you can make sure that all the image are there.

SECOND, you must use our accurate templates for your sizing, which you can obtain from our website in the section labeled "Templates". Using these should make it easy to prepare your finished layout. our site has easy-to-use templates that can be downloaded for QuarkXpress, Illustrator, Photoshop and InDesign.

THIRD, any font that you use to create text using a layout program must be submitted along with your artwork. If you are using TrueType fonts (.ttf) it is easy. Just search through the directories where your fonts are stored until you find the .ttf font, and then copy the font to a folder called FONTS and put it in the folder where you are storing the artwork for the project. Once you are finished preparing the layout, you will be able to copy the entire folder along with your layout and images to a disc. If you are using Postscript fonts, the process is the same, but each font will have TWO files that you need to submit. One of these is called the screen version and the other is called the postscript version.

So with all that in mind, you can begin importing your images into the document with the layout program you are using. Depending on which program you are using, this will be either called GET PICTURE, IMPORT, or PLACE FILE. Simply select the image that you wish to use (in certain programs you will have to create a picture box to import it into), and move and size it accordingly.

CMYK COLORS

(Used on Insert, Booklet, Tray, Record Jacket, Poster, and 4/c CD surface printing)

When creating colors in the layout program, it is important that you select the right mode for the color. Accomplishing this task is different with each program, and some decision making is involved as well. Depending on which type of printing you have chosen, you can determine how to set up the color in your layout program accordingly, as follows.

For full color text, the creation of background colors, or colorizing Grayscale images, you will use CMYK or process color mode. By using only process separation colors, your layout will properly separate into only Cyan, Magenta, Yellow, & Black (CMYK).

If you have chosen 4/1 printing for your booklet and/or tray card, that means that the front of your booklet and tray card can be printed in full color (CMYK) and that the back of the booklet (also called the inside of the booklet) can only be printed in using black (what is called "K only"). If you are using a clear tray jewel case and printing on the area that appears under the CD, that can only be printed in black as well.

On the other hand, if you have chosen 4/4 printing, it means that the front and back of your booklet and tray card can all be printed in full color (CMYK).

SPOT COLORS

(Used on standard-quoting CD surface printing, additional add-on colors for insert printing)

If you have received our standard 1-3 color CD quote, then you must use the **Pantone Solid Coated Color** library from your color selection for CD surface printing.

If you have chosen to use an additional color on your insert, jacket, or poster printing using custom Pantone or PMS colors (including metallics and fluorescents), then you must set up any custom color being used to print as a spot color, so that it will appear on another piece of film when it is separated. You must use the **Pantone Solid Coated Color** library for these additional colors. Note that using PMS colors will cost additional money for both the printing and the film charges. With the exception of that situation, all other colors must be set up to separate as CMYK.

USING THE COLOR BLACK

The color black should be used with very careful attention. In most full color images, the color black will consist of a mixture of K plus each of the other colors. Standard Photoshop black is created using the following color percentages: CYAN=63%, MAGENTA=52%, YELLOW=51%, and BLACK=100%. In the printing industry this color build is called Rich Black. You can check whether your Photoshop images use these proportions by using the eyedropper color sample tool. Sometimes the black color in certain images will vary somewhat, depending on the density of the color.

Usually, it is desirable to use a color black in your layout program which will exactly match the black of your images. Otherwise, the black created will look lighter in color and not match correctly the tone used in the image. After printing a "CYAN=0%, MAGENTA=0%, YELLOW=0%, and BLACK=100%" Black will look much different than a "CYAN=63%, MAGENTA=52%, YELLOW=51%, and BLACK=100%" Black.

To accomplish this in your layout program, create a new color called Rich Black, using the color amounts above, or whatever will match appropriately with the black color in your images. This color should be set to separate as a process color. Then assign everything that you want to match the black color or your images to be this same color.

Note that you will still use the normal K-only black for anything that you want to match with grayscale images and anything that is printing on pages that are being printed as black only.

CHECKING COLORS

When you are finished you can check your layout colors setup to make sure that any custom colors you have created have been specified as Process colors, or set up as spot colors if you are printing additional custom colors with your job.

As long as you remember to check the color mode of your images and your color setup in your layout, include all your fonts and images on the disc, not to accidentally move your cut & fold mark guides, and make sure you've included enough bleed area for your images, and check to make sure that your images are of sufficient resolution, you should be all set.

BLEEDS AND SAFE AREAS

Whenever an image is printed, folded and cut, there is some degree of inaccuracy in the cutting process. Even sophisticated machinery is not perfect, so sometimes one side of an image gets cut a little close or a little far. for this reason, printers require something called a bleed to ensure that the final printed product will still look good, regardless of whether a slight variation occurs during the printing process. Otherwise, if the cut line shifts to be outside the picture edge, there will be a thin white line on that edge of the final printed product.

But don't worry, creating bleeds is quite easy. It just means that you have to extend the pictures that you are using or the backgrounds you create past the place where the image is supposed to be cut. The recommended amount of bleed to use is 3mm or 1/8th of an inch, and a bleed should go all the way around the cut lines.

Because the cut can also shift to be inside the edge, there should be what is called a safe area inside the image. That safe area should also be 3mm or 1/8th of an inch—but inside the cut edges—and in this safe area there should be no text that might get cut off if there is a shift in cutting.

NOTE: Because the area on each side of a tray card where the spine text appears is only about one quarter inch wide, there is very little room for error (and also very little room for the text which needs to go there) so the cutting process is somewhat more precise. Accordingly, for the left and right sides of the tray card you only need to keep the text one sixteenth of an inch away from the edge.

7. OTHER ISSUES TO BE AWARE OF

BAR CODES & TOP SPINES

Many stores and distributors prefer that the merchandise items that they carry utilize bar coding. For CD products, this bar code is normally placed on one corner of the tray card (or on the back of a CD sleeve or digipak). MorphiusDisc Mfg can create a bar code for you and add it to your artwork, whether or not you have your own UPC manufacturer number. Please leave a white box wherever you want us to place the bar code. This box can be a variety of sizes, so we recommend that you look at some CDs in your collection and pick a size that you like from one of them. If you have your own manufacturer number but need us to create the bar code tif for you, simply give us the number when you send in your order.

Some companies also like to use what is called a top spine label on their CDs. This is a sticker that is applied to the top edge of the jewel case which allows people browsing through the shelves of a record store to see the name of the artist without having to pick the CD up. It also gives store clerks the ability to see the bar code information as well.

MOCKUP BOOKLETS

Mockup booklets are required for all printing jobs that involve multiple folding or on print jobs of stapled booklets that have multiple pages. They don't have to be pretty, but we need to see how the layout is supposed to be paginated. Remember when setting up a larger booklet that the pages are set up like a book (i.e., from left to right page 8 then 1; page 2 then 7; page 6 then 3; page 4 then 5). If you are using our templates, you'll notice that the page numbers are noted just above the area where the panels should go, so as to decrease the chance of an error being made. Please leave the page numbering there, unless you decide to change the page ordering.

8. PRINTING ON THE CD SURFACE

SET UP

Setting up the design for on your CDs is significantly different than creating the design for your booklets and traycards. For starters, unlike the booklets, there is no requirement for the creation of bleeds. Because the image is normally silk-screened onto the CD (except if you are paying for high definition offset printing), the image resolution requirements are different. The image area is of course round, and toward the inside of the CD, there are several factors to be aware of moving from the outside edge toward the center of the CD, the surface of the CD changes from the coated aluminum to the mirror

band area. Then there is a section where the CD can have no printing at all called the "stacking ring", and after that there is another section where the surface is transparent called the "hub" – but can be printed on if desired. As such, it is usually a good idea to print a solid background color (or white) before printing the rest of the image on a CD, because it gives the image on the disc a more consistent look as it crosses into each of these regions. For an easier to understand diagram of this, take a look at our printable CD template.

If you want a background color (white or otherwise), also called a "flood coat" just ask. A flood coat does count as one of the three colors that come included with our standard CD packages.

Some people prefer to use white as one of their colors in the design, not as a flood. Because white does not normally print on paper, it is hard to display it as a color. Our suggestion is that you create a new color called PRINT AS WHITE, which you might want to set up as being one of the Pantone cool gray colors. On screen it will look grey, but it will get printed white, and the film to produce the white color will say PRINT AS WHITE right on it for clarity.

*Please note that while we are happy to use other colors as flood coats, they will often mix with the colors being printed on top of them and alter the appearance of those colors. If your design uses a monotone, duotone, or tritone image, it is important that you inform us so that the appropriate screen angles can be specified for film output. Note that duotones and tritones often look very different on screen, so we recommend that you output a test separation of your duotone colors onto paper and then use common sense about color mixing to determine if the result will create the effect you are looking for.

*Please note that any color of ink printed on the surface counts as a color. This includes using white and black ink.

COLOR MODE FOR ON THE CD

Normally for the printing of 3 or less spot colors on a CD, the PANTONE MATCHING SYSTEM colors are used (PMS). Any color can be selected from **Pantone Solid Coated Color** library. You will find that the variety is extensive, allowing for selection of most of the possible colors that process printing can generate, without having to create a process color build. On the other hand, if you wish to print a full color image, or lots of different colors that would be costly to print as spot colors because of the number of films required, you can also use CMYK printing, just like on the booklets and traycards.

One must be aware though, that the resolution is not as high as when printing on paper, and the accuracy of colors is especially variable when printing on the silver surface of the CD. Using a white flood (i.e. a fifth color) is strongly recommended for all on-CD printing to be done using CMYK process.

If you are using gradients or halftoning for the on-CD printing, you must use our silk-screening compensation chart in order to achieve accurate color representation (see chart). If you do not feel comfortable executing these changes to your images yourself, we recommend that you let us take care of it for you for best results.

If you are attempting to use Photoshop to create colors for the design on your CD, please be aware that your colors must be set up to separate properly as either CMYK or PANTONE CUSTOM colors from the **Pantone Solid Coated Color** library. Otherwise, additional charges will apply for us to fix the images. This can be accomplished in Photoshop by clicking on the color palette and then selecting CUSTOM to choose the color you are using from the **Pantone Solid Coated Color** library of the PANTONE CUSTOM guide. If setting up spot color separations this way, please generate a separate layer for each color used. Be sure to label each layer as the PMS color so we can properly separate it for you. You can also take a color picture and convert it to grayscale and then change it into a duotone from there and select colors that way.

9. COMMON CUSTOMER MISTAKES TO BE AWARE OF

Image Resolution: It is very important to make sure that the image resolution for all images used is set at 300 dpi at 100% sizing.

Bleeds: It is very important to make sure all 4 cut sides of a piece have at least 3mm or 1/8" bleed or extended image area added. This area is cut off during the finishing process. If bleeds are not added, we cannot guarantee accuracy in the cutting which make result in a white line appearing around the edges.

Templates: It is very important to make sure that you are using the proper template. If you have any questions as to which template you should be using, please call us before proceeding.

Fonts: It is very important to include all fonts that are used in your layout. We all unable to make changes in the text if requested, and we may not be able to print the proper fonts if they are not supplied with the artwork.

CD Surface Color Selection: If you were quoted for a standard 1-3 color package, you will need to use colors selected from **Pantone Solid Coated Color** library. Every layout program has this color library added to it for easy selection. You can set up these colors very easily in Quark, InDesign and Illustrator. Photoshop is a little trickier. Remember a CMYK or RGB image in Photoshop that looks like it only uses red and black will still have to be separated as a full-color image. That red and black would have to be set up using a selected PMS color and be separated from the black onto a different layer. If you have any questions concerning this process, please call.

In closing, if you have any questions at all concerning your artwork, please call us. A few questions in the beginning stages might save days of turnaround time and costly changes later.

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