

# Designer's Guide

## to PIP Printing Riverside/Corona

### *Welcome Designers!*

---

We have produced this booklet to better serve the needs of our design clients. In the interest of brevity, we must assume that you have at least a basic understanding of computers, your software of choice and graphics/printing terminology.

#### TABLE OF CONTENTS

File Preparation Guidelines . . . . .	2
A Word About Word Processors <i>et al.</i> . . . . .	6
Check Out Our Toybox . . . . .	7
Platesetting . . . . .	7
Digital Color Printing . . . . .	8
Full Color Offset Printing . . . . .	9
Large Format Color Printing . . . . .	10
Supported Applications and File Formats . . . . .	11
Print-to-Disk Files . . . . .	12
Remote Printing and Online Ordering . . . . .	13
Impositioning Services . . . . .	14
Terminology . . . . .	15
In Conclusion . . . . .	16
Production Notes . . . . .	16

**EDITOR'S NOTE:** This guide will be updated frequently. **Check our web site for the most recent version** or check with us whenever you visit. Thank You.

**Revision date: 5/23/02**

# FILE PREPARATION GUIDELINES

---

*We have provided these guidelines for the following reasons:*

- To provide our customers with industry-standard information in an effort to educate and assist them in the production of professional quality digital files.
- To establish a consistent level of communication between customers and ourselves in order to provide the quality printing and digital output expected by our customers.

Please take the time to read these guidelines, if not to increase your level of expertise, at least to familiarize yourself with our terminology and services.

## FONTS

**Provide all fonts** (use Type1 instead of TrueType if possible)

There are literally tens of thousands of fonts available today. Consequently, we don't own them all. If you are unfamiliar with transferring fonts, consult us regarding our font library.

BEWARE! Placed EPS files, OLE objects or WordArt that contain type may require fonts not seen by your application until they are printed. To avoid delays, be certain to include ALL fonts necessary for the production of your job.

New classes of fonts have emerged. These fonts may have the same name as standard fonts, but possess different attributes (ie. kerning, thickness, etc.). This can result in font substitution at the RIP level and will cause reflow of your text (at the very least). You should inform us if you have provided us with a modified font, **Adobe Multiple Master** fonts, OpenType fonts or if your font is a slightly different or an older version from ours.

### **... and use them wisely**

**Do not use menu attributes to force a font to be bold, italic or shadowed.** This will cause any combination of undesirable effects when printed to a high resolution device. Some examples are:

**Bold** — Causes a double-print effect that is especially noticeable on large serif fonts. May revert to the plain version, thus losing the emphasis intended for the word or character.

**Italic** — May revert to the plain version, thus losing the emphasis intended for the word or character.

**Shadow** — Will only print at 85 lpi regardless of the settings used when sent to print.

**Outline** — Outlines appear much thinner on a high resolution platesetter than they do on a 600 dpi laser printer. Sometimes they verge on invisible.

# **GRAPHICS**

## ***Provide all support graphics***

Just as you would provide us with all of the necessary fonts for a particular project, make sure you provide all of the necessary support graphics. Many applications provide utilities to gather all relevant graphics for a job (please see your application documentation for details).

For an added degree of security, provide us with the native version of your graphic. While this is not necessary, it does allow us to perform “on-the-fly” corrections to your files. (Additional charges apply).

## ***Use appropriate file formats for placed graphics***

Not all file formats are designed the same. ***For reliable results, use EPS or TIFF formats for placed graphics.***

GIF, WMF, JPG, PICT, and WPG formats are unreliable when sent to high resolution output devices. They may print on your inkjet or laser printer, but don't count on predictable results on a platesetter. By the way, this is not an all-inclusive list. To be safe stick with EPS or TIFF formats.

## ***Color Mode***

Here are some basic settings your placed graphics should adhere to:

- Color Bitmaps:

Platesetting (offset press) – CMYK (no RGB data)

Large-format InkJet — CMYK and RGB TIFF or EPS (***CMYK EPS preferred***)

- All vector artwork is to be CMYK or Spot (Pantone preferred), no RGB data.

## ***Resolution***

Here are some basic settings your placed graphics should adhere to:

- Color and grayscale bitmaps:

Platesetting – 300 dpi

Large-format InkJet – 72-144 dpi

- Line Art (1-bit black and white):

Platesetting – 600-1200 dpi

Large-format InkJet – 300-600 dpi

- All vector artwork is to be CMYK or Spot (Pantone preferred), no RGB data (except for large-format inkjet).

# PAGE SETUP

## Document Page Size

Do not randomly place your artwork or select a page size. Set your page sizes according to these guidelines. If you are unsure of the best layout, consult us.

Single Page Layouts (one page per side) – Set your document page size to the final *unfolded, finished cut* size, regardless of bleed.

Multiple Page Layouts (two pages per side, booklet) – Set your document page size to the final *folded* page size. For example, if your final piece is a letter size sheet folded in half to 5.5" x 8.5" (like this Guide), set your document page size to 5.5" x 8.5".

Exceptions – If you are familiar with imposition (converting reader spreads to printer spreads) then disregard the instructions above and create your document in printer spreads and save money.

## Marks and Bleeds

**You should always include crop and fold marks.** Without these we cannot be certain where cutting and folding should occur. Crop and fold marks should be made with hairline (0.1 pt.) rules or strokes colored "registration." This ensures that they occur on every plate. Additionally, your crop and fold marks should be uniform in length and placement. For example: all marks  $\frac{1}{16}$ " long and  $\frac{1}{16}$ " from edge of page.

Bleeds should extend off the page at least  $\frac{1}{16}$ " (0.0625") and no more than  $\frac{1}{4}$ " (0.25").

If your document is set up otherwise, **we will be required to make the necessary changes at our current file alteration rates.** Please consult with us if you are unsure about how your file should be set up.

## Margins

Keep margins in mind when designing your layout. If you are printing on an oversized sheet and then trimming it out, your images can safely bleed off the page. If you are printing on the final size paper (not trimming it out) margins should be set up accordingly:

Offset press, 1 and 2-color –  $\frac{5}{16}$ " (0.3125") margin on one edge, preferably the shortest edge, both sides

Offset press, 4-color –  $\frac{1}{2}$ " (0.5") on one edge (consult us for a more in-depth analysis for this kind of project before beginning your layout).

Color Laser Printer –  $\frac{1}{8}$ " (0.125") on all sides

Large-format InkJet – 1" on all sides

## **...ALSO IMPORTANT**

### **Provide a printed sample of your file** (composite and separations)

This allows us to identify which graphics to expect and where, text placement and flow, color separations to expect, a specific page of a multi-page document, etc. Without a hard copy we don't know what to expect; therefore you may not get what you thought.

### **Make sure we can use your media**

We can use a variety of media types with in-house drives. If you use an alternate medium, we can use your drive on our workstations. Although we do not recommend the use of compressed media or files, we do support industry standard formats. These are our in-house supported media formats:

- Floppy
- Internet - Browser, FTP or email
- Iomega Zip 100/250MB
- Iomega Jaz 1Gb
- CD/DVD
- Compact Flash
- Smart Media
- Please call regarding additional charges for drive installation and decompressing multiple disks and/or files.

## **APPLICATION SPECIFIC TIPS**

QuarkXPress – **Collect for Output.** This provides us with all of the necessary support graphics and a list of fonts used. It's there for a reason; use it.

**TIFF.** When placing color/grayscale TIFFs in Quark, never use a background fill of "None." Always use a color such as white or 0% black or save the file as an EPS with a clipping path. Otherwise, you may get "jaggies" on the side of your image.

InDesign – **Package.** This feature preflights your document and allows you to collect all graphics and fonts used.

**RGB images.** RGB images in InDesign print beautifully to inkjet printers. However, these same images may print desaturated to CMYK PostScript devices.

PageMaker 6.5/7.0 – Use the **Utilities: Plug-ins: Save for Service Provider** feature to collect fonts and images.

Publisher – 97, 98, 2000 and 2002 all have different ways of setting up a multicolor (spot Pantone or Full Color) document. If this is done after the document is designed, all colorized items will revert to their original colors. Ask for the "Microsoft Publisher Flyer" at our store for more detailed instructions. Use the **Pack and Go** feature when you are ready to bring the file to us. This feature gathers all of the fonts and images and compresses them for use by us.

**NOTE:** All client files (Mac and PC) destined for platesetting and large-format inkjet output are examined using FlightCheck software. If a problem is found, the customer will be notified to determine if the problem needs correction. If the file requires alteration, you will be charged a \$10 processing fee. If you elect to have PIP alter your file, the \$10 fee is applied towards alteration charges (call for current hourly rate).

## **A WORD ABOUT WORD PROCESSORS ET AL.**

We provide service to a great number of people who, in turn, use a great variety of software applications to produce their jobs. As a result we have learned much about Word Processing, Spreadsheet, Presentation (audio-visual/slide), and low-end graphics applications (all of which are referred to below as “Business Applications”).

Business Applications are what is referred to as “device-dependent” software. This means that they were never really intended to produce files for distribution; they were meant to be used on the same computer you created them on.

How does this affect your job when you bring it to us? Here is just a partial listing:

- ***No font record or font substitution warnings\**** – Unless we have your exact font on our system **and** have it activated at the time we open your file, the application will substitute the font without any warning. The result: all of your hard work to make the text flow just the way you want it is instantly ruined. Currently there is no way to avoid this other than to have you provide **all** necessary fonts on a disk along with the job. (See File Preparation Guidelines)
- ***Pages and page margins are based on the printer selected\**** – The result: when we select one of our printers your margins may change and cause reflow of text.
- ***Linked files\**** – Some Business Applications allow linking of files. This means that any file you have linked to *must* be provided with the document you intend to print. Otherwise, the linked file will not print properly, if at all.
- ***No color separation capabilities*** – If your design was intended to be printed in *more than one color* on an offset press (not color laser printer), then you should be aware that Business Applications (with the notable exception of Publisher) do not support color separations. This means that we will have to convert or recreate your document for an additional charge.

These issues are typically addressed by mainstream graphics applications and, therefore, maintain design and layout integrity. If your layout is even somewhat important to you, *we strongly advise* that you consider the purchase of industry-standard graphics applications or have a professional (like us) layout your design for you.

## **Typical Business Applications**

- WordPerfect
- AppleWorks
- Microsoft Word
- Microsoft Works
- Microsoft Publisher
- Microsoft Excel
- Microsoft PowerPoint

\* These issues may be avoided by reading the "Print-to-Disk Files" section.

## **CHECK OUT OUR TOYBOX!**

---

We have made every effort to maintain a collection of the most sophisticated, high-quality imaging equipment available. We have provided product specifications for our toys below.

### **PLATESETTING**

---

Platesetters are high resolution imaging devices that use a laser to either burn an image onto a metal plate or to expose photo sensitive plates. We selected our platesetters based on their high degree of repeatability, dot-for-dot.

This process is also referred to as **Computer-to-Plate (CTP)** and is a relatively new technology employed by only a few printing companies. The process allows us to produce quality better than traditional film/metal plates. Additionally, CTP can cost less and allows for quicker turnaround times.

#### **Platesetter Specifications (Metal/Polyester)**

- Maximum Plate Size: 14" x 20" /  
13.3" x 19.875"
- Resolution: 2540 dpi / 2400 or 3600dpi
- Line Screen: up to 200 lpi (both)
- Media: Thermal Metal Plate / Light Sensitive Polyester Plate



## ***Production Notes***

- Photos/bitmaps should be prepared at 300 dpi at final size, line art should be prepared at the highest *optical* resolution your scanner can provide (600-1200 dpi).
- There should never be RGB data in documents destined for platesetting.
- Try to avoid rotated or skewed placed graphics. These can increase processing time and may cause RIP errors.
- Some Pagemaker 6.5 files with rotated EPS bitmaps will not RIP properly. Use TIFF images instead (6.5 supports clipping paths for TIFF's).

## ***DIGITAL COLOR PRINTING***

---

PIP's Digital Color Press produces true 200 lpi (near photo quality) images and can show overprinting and trapping. They are attached to dedicated high-speed print servers, can print on full-bleed tabloid spreads and image on heavy card stock! ***These devices were designed for short-run color printing, proofs and comps.***

### ***Printer Specifications***

- Maximum Sheet Size: 12.6" x 19.2"
- Maximum image area: 12.35" x 18.95"
- Resolution: 600dpi, excellent quality
- PostScript Level 3
- Media: we use 28/70# Premium Color Copy Paper, but we can run a wide variety of media up to a 12pt. card stock.

### ***Production Notes***

- Photos/bitmaps should be prepared at 300 dpi at final size, line art should be prepared at 600 dpi).
- Overprinting and trapping are available upon request, a very useful feature for proofing jobs that are destined for offset printing.

## **FULL COLOR OFFSET PRINTING**

---

Our Heidelberg GTO can print up to 4 colors in one pass. Of course this means high quality full color images, but it also means we can produce jobs with large solid areas and fine screens.

**HEIDELBERG**



This press also gives us the ability to produce 2 color perfecting jobs. Perfecting is the process of printing the front and back of a sheet in one pass. The result is faster production times and lower cost.

Our Computer-to-Plate system provides exceptional repeatability, highlight and shadow detail, and registration.

### **Press Specifications**

- Maximum (Minimum) sheet size: 14" X 20" ( $4\frac{1}{8}$ " x  $7\frac{1}{8}$ " )
- Maximum image area:  $13\frac{1}{2}$ " x  $19\frac{3}{4}$ "
- Maximum sheet thickness: 15 pt.
- Maximum line screen: 200 lpi
- Gripper margin, preferred (minimum):  $\frac{1}{2}$ " ( $\frac{3}{8}$ " )
- Two (2) color perfecting

### **Production Notes**

- Refer to **Platesetter** for specific digital file requirements.
- Jobs with images that bleed must be printed on larger stock.
- Trapping is available, however, it may not be necessary. Please ask us if you have any questions about trapping.
- While we can print from your supplied film, your cost will be lower if we produce digital plates.
- Printing on colored stock *will* affect the color of inks applied to the paper.

## ***LARGE FORMAT COLOR PRINTING***

---

Our Large Format Color Printers produce beautiful full color large format images. They provide smooth and subtle shading. A variety of media is available for these printers including banner, backlit and point-of-purchase displays. Artists can produce limited edition posters with giclée quality.



### ***Printer Specifications***

- Maximum Sheet Size: 5' x 150' (yes, *feet!*)
- Maximum image area: 58" x 1798"
- Resolution: 600 dpi / 1200 dpi
- Margins: 1" all sides
- Media: Presentation Bond, High-Gloss Photo, Semi-Gloss Photo, Nylon Banner (ask for availability of other specialty media)
- PostScript Level 3
- Inks: Six color (CcMmYK) UV inks are standard



### ***Production Notes***

- Keep margins in mind when selecting your paper size. Files that require smaller margins or bleeds *MUST* be printed on a larger paper size.
- All color or grayscale bitmaps should be 72 to 144 dpi at final printed size. Black and white 1-bit bitmaps should be 600 dpi.
- Heavy solids and full reverses should be printed on High-Gloss Photo paper, or Semi-Gloss Photo if lamination is required). Heavy saturation of ink can cause warping of paper media.
- Discounts for multiple prints are available, ask us for details.
- ***Lamination (gloss, matte, scuff-resist, etc.), mounting (Foamcore, Gatorboard) and framing are available and recommended.***

# **SUPPORTED APPLICATIONS / FILE FORMATS**

We are constantly updating/upgrading our list of applications. Below is a partial list of applications that we can provide output for.

## **Illustration**

- Adobe Illustrator (🍏/🖱)
- Macromedia Freehand (🍏/🖱)
- CorelDraw (🍏/🖱)

## **Page Layout**

- QuarkXPress (🍏/🖱)
- Adobe InDesign (🍏/🖱)
- Adobe PageMaker (🍏/🖱)
- Microsoft Publisher (🖱) †‡

## **Photo Editing**

- Adobe Photoshop (🍏/🖱)

## **Presentation †**

- Microsoft PowerPoint (🍏/🖱)

## **Spreadsheet †**

- Microsoft Excel (🍏/🖱)

If you do not use the applications above we can provide digital output from files saved in the following formats (may require additional charges):

- |        |         |       |                 |       |
|--------|---------|-------|-----------------|-------|
| • EPS* | • TIFF* | • JPG | • WMF           | • CMX |
| • PDF* | • CGM   | • BMP | • and many more |       |

Please read the “Check Out Our Toybox” section for resolutions, page sizes and other pertinent information regarding output to our digital printing devices.

## **\* Preferred file formats**

† **Please note that not all applications are created equal.** Some services are not available for these programs, some services require additional charges. Please see “A Word About Word Processors *et al.*”

‡ Publisher 2000/2002 have spot (Pantone®) and process color separation capabilities, however, versions through 98 do not.


## **Word Processing †**

- Microsoft Word (🍏/🖱)
- WordPerfect (🍏/🖱)
- AppleWorks (🍏)

🍏=Mac    🖱=Windows

**Look Who Likes Us!**

The good people at Quark, Adobe, Macromedia, Corel and Microsoft have granted us “Authorized” status. What does that mean to you? It means that your files are in good hands. We have the experience and equipment necessary to produce your job to your satisfaction.



Adobe Authorized Service Provider









# **PRINT-TO-DISK FILES**

---

## ***What? Why? How?***

- *What is it?* A Print-to-Disk file is all of the information a specific printing device needs to output your file...all in one neat (albeit large) package.
- *Why would I want to do that?* With a Print-to-Disk file you don't have to worry about providing fonts to us or wonder if we have your application. Text reflow is eliminated and all of your formatting is intact. This is really helpful for word processing or other business applications.
- *How do I do it?* Just follow the instructions below.

**Please Note:** We offer these directions as a courtesy to our customers. We can not provide technical support beyond what is provided here. Additionally, we do not assume responsibility for any complications associated with these directions.

## ***Windows 95/98: Creating a Virtual Printer***

This will create a Virtual Printer on your computer. You may require your Windows CD to complete the installation.

- Click on the "Start" button, highlight "Settings", then click on "Printers"
- Double-click "Add Printer"
- The Printer Wizard Screen will appear, select "Next"
- Select "Local Printer," then "Next"
- Select "AGFA" from the Manufacturers panel and "AGFA-Avantra 25" from the Printer panel, then click "Next"
- From the Available Ports panel, select "FILE: Creates a file on disk", then click "Next"
- Give the printer a useful name, such as "PIP Printing"
- Select "No" for default printer
- Select "No" for test page, then "Next"
- The Properties screen will appear, select "OK," then "Exit"

## ***Windows 95/98: Now What?***

When you are in the application of your choice, simply select the Virtual Printer you have just set up. After carefully choosing your options, select "Print." A "Save File" dialogue box will appear. Type in the name of your

Print-to-Disk file with “.prn” at the end and select “Save.” Bring this file in to us and we will provide you with the quality output of your choice.

### ***Warning***

The downside of a Print-to-Disk file is that we will have limited editing capabilities. What you send is what you get. Please also read the disclaimer at the end of “File Preparation Guidelines” before you commit to the Print-to-Disk solution.

Print-to-Disk files are much larger than the files used to create them. Consider how you will get the file to us (see the “Make Sure We Can Use Your Media” section of “File Preparation Guidelines”).

## **REMOTE PRINTING AND ONLINE ORDERING**

If you have access to the internet, you can order printing from our web site.

***Step 1 – Follow our File Preparation Guidelines (page 2)***

***Step 2 – Compress all of your necessary files***

One compressed document is preferred. This minimizes transmission times and provides some basic transmission error correction. We can handle \*.sit, \*.zip, \*.hqx, and DiskDoubler formats. **We will not process self-extracting .exe files.**

***Step 3 – Log on to our Website - [www.printmystuff.com](http://www.printmystuff.com)***

***Step 4 – Place your order***

**Option A – Click on "Order Now"**, follow the onscreen instructions

**Option B – Download printmystuff FTP** and follow the directions in the ReadMe file.

**Option C – Click on "Send a File"**, choose Browser, FTP or Email and follow the onscreen directions.

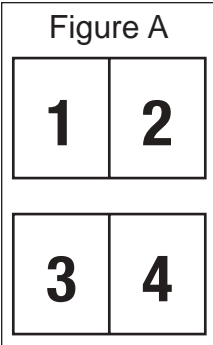
***Important:*** We will not process an incoming job unless instructions and contact information are provided. This information can be provided by filling out our online order form, faxing a completed Output Request Form, via email or phone call. If your job has a crucial deadline, you should definitely call ahead of time to confirm scheduling.

***Very Important:*** Fax us a sample of your job so we know what to expect.

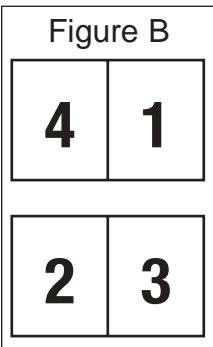
# IMPOSITIONING SERVICES

---

Have you ever had to produce a newsletter or other multipage document? If you have, you are familiar with the frustration of deciding how to lay out all those pages. Do you prepare the pages in numerical order, “Reader’s Spreads” (Fig. A), or in “Printer’s Spreads” (Fig. B)?



Reader’s Spreads are the easiest to lay out because we logically expect page 1 to follow page 2. This is also how most page layout and illustration applications produce multiple pages. Unfortunately, this is not how the pages are printed. If you use this layout technique, you will need impositioning services. Impositioning will take your Reader’s Spread format and place the pages in Printer’s Spread format, which is necessary for a multipage, doublesided printing job, like our 4 page example here.



Printer’s Spreads are more difficult to lay out. Typically, you will have to manually number each page, experiment with chapters or sections features, and/or work in a less-than-natural order. For instance, to go to your page 4, you have to go to your application’s page 1, etc. Quick test...to get to your page 17 of a 20 page document, which application page do you go to? (page 8 is the answer). Sure you could endure the frustration, but why, when we can process your Reader’s Spread file and convert for you?

## ***Some Production Tips for Impositioning***

- Contact us if you plan to have us imposition your file. Nothing beats talking to our professionals about your job.
- Set up your page size to match the final page size, not the printed paper size. For example, this guide was laid out using a 5.5” x 8.5” page size, because it was produced 2-up on 8.5” x 11” paper.
- You will always be better off creating a multipage document in a page layout application. Illustration programs are great... for illustration, but they typically have quirky type controls and redraw very slow.
- We charge a nominal fee for impositioning; call for current rates.

# **TERMINOLOGY**

---

bitmap - Any image composed of pixels. Typically a photograph or other scanned image. TIFF, BMP, JPEG, GIF, and some EPS files are bitmaps.

bleed - The portion of an image that extends to the edge of a printed sheet.

CMYK - Cyan, Magenta, Yellow and blacK (subtractive color model). The color of inks that, when combined, are used to print "full-color" jobs. Not all colors can be reproduced using CMYK.

dpi - Dots per inch. The physical number of dots a printer can image in one linear inch. Different from lpi. Commonly used to describe the number of pixels per inch (ppi) for any given bitmap image.

gripper - The un-imageable area of a sheet of paper which is used by a printer/press to hold the sheet during the printing process. Varies from device to device.

kiss-fit - Printing without the benefit of trapping.

lpi - Lines per inch. Also known as line frequency or line screen. The number of rows per inch of the grid-like dot pattern a printer uses to simulate shades of gray.

overprinting - Causing any one image to print on top of another. Black text is traditionally set to overprint items behind it to avoid white spaces caused by mis-registration.

perfecting - Printing both sides of a sheet of paper in one pass through a press.

process color - colors composed by the CMYK color model.

RGB - Red, Green and Blue (additive color model). The three colors of the visible light spectrum that, when combined, produce all of the colors we see on computer monitors. Not all of these colors can be printed. This color model should never be used for jobs intended for platesetting or offset printing.

spot color - A color intended to be printed with a specially mixed ink. Typically selected from the Pantone color model. Instead of using the four CMYK inks to reproduce a color, one specific color of ink is used (ie. PMS 185 is a red ink). An effective and inexpensive tool for adding color to a job.

trapping - Causing an image to expand (spread) or contract (choke) and slightly overprint its surrounding elements to avoid white spaces caused by mis-registration.

## ***IN CONCLUSION***

---

This guide was intended to improve our communication with designers and is not all-inclusive. No written text can replace hands-on experience or a good rapport with your service provider.

We suggest that if you plan to design for print you should take the opportunity to read as many trade publications and books about graphic design *AND* printing as you can. A successful graphic designer is both creative and technically aware of the mechanics of printing.

We will continue to update this guide with corrections and additional information as we come across it. So, be sure to check the revision date the next time you see our guide to make sure you have the most recent version.

## ***CHECK OUT OUR WEBSITE!***

Alright, OK. Everybody has a website. Ours, however, is designed for you, the Digital Designer. It may be simple, but it has some resources that may be useful to you. We are located at <http://www.printmystuff.com>. Our website has printer drivers, digital order forms and links to useful sites. We try to keep it current as well.

## ***PRODUCTION NOTES***

---

This guide was entirely written, designed and digitally printed at PIP Printing of Riverside/Corona. The cover was printed on our Xerox DocuColor 2045 Digital Color Press. The inside text was printed, combined with the cover then collated, saddle stapled and folded on our Canon ImageRunner 600.

The guide was designed using Freehand, Photoshop, and QuarkXPress on a Power Macintosh G4.

Designed and written by Michael Pantoja. Photography by Justin Tracy.