

Printing & binding tasks

Your discussions with print shops should begin before you complete your print-ready file. Don't rush this process. You should submit a description of your book to multiple print shops for a quote. Evaluate the quotes you receive and don't hesitate to ask to see samples of similar work that they have done.

Finding a printer

The Yellow Pages provides listings of print shops under "Printers" and "Copying & Duplicating Services". The Internet provides more extensive searching capability. I like Yahoo's Yellow Pages (<http://www.yahoo.com>) because you can identify your location and then ask for the nearest print shops. It provides the name and number of the print shop, the distance from your house, and even a map.

As you look at the Yellow Page advertisements and talk to print shops, keep in mind that you are looking for a print shop that has expertise in digital printing. Ask them what digital printing equipment they have and whether they accept digital files from customers. Visit the shop and have a look around. Chances are that you will have better luck in a quick print shop with counter service where the copiers and printers are out in the open. If all you smell is ink, and the equipment is out in the back, you have found a traditional printer who may have little interest in your short-run book. However, you may need to work a little in both

worlds. The print shop that printed the cover of “The Writing 69th” had an automated offset press that was well suited for short runs. The place smelled like ink, but they also had color copiers and a full design department. The print shop for the inside of “The Writing 69th” had Xerox DocuTechs⁶³ and there wasn’t a traditional printing press in sight.

Working with a printer

One of the most important things that a publisher would do for you would be to get a good price from the printer. Every publisher has an ongoing relationship with one or more printers. Publishers have an advantage over individual authors because they can promise printers a steady stream of print jobs. If you were a printer, wouldn’t you provide better prices and service to a valued customer who brought you many jobs?

Pricing considerations

Printers like to get lots of jobs and they like their equipment to be busy. (The story goes that a print shop owner thinks that the sound of a running printing press is “make me money, make me money, make me money...”) Therefore they give special preference to larger customers who provide significant print volumes. This puts you at a disadvantage, but it also helps frame your relationship with the printer. Your advantage, however, is that most books amount to 100 or more pages. If you want multiple copies, that turns into a lot of printed pages. The more pages you print, the more attractive you are as a customer. Here’s a quick calculation: take the number of pages in your book and multiply it by the number of copies you intend to print. For

⁶³ DocuTech is a Xerox brand name for a line of high-speed copier/printers. There are many other vendors of such high-speed digital printing and copying equipment, but Xerox developed the product concept and has sold the most products. Therefore you are very likely to find print shops that own Xerox DocuTechs.

example, “The Writing 69th” has 172 numbered pages and I wanted 100 printed copies. That’s 17,200 printed images.

Figure 33 – Formula for calculating the number of printed images

$$\begin{array}{r} \text{_____} \text{ Numbered pages} \\ \times \text{ _____} \text{ Printed copies} \\ = \text{ _____} \text{ Printed images} \end{array}$$

Note that I’m using the term “printed images” instead of “pages” to avoid confusion with the number of sheets of paper that will be required for each book. In most books, the text is printed on both sides of the paper. This is called duplex printing. If the text is only printed on one side of the paper, it is called simplex printing. There is an obvious economic advantage in printing duplex: you use half as much paper as a simplex book! “The Writing 69th” was printed duplex, and so each book requires only 86 sheets of paper, even though it has 172 numbered pages. Since paper can be a significant factor in the total cost of your book, you should plan on printing duplex. This will also reduce the weight of your book, which is important for mailing purposes.

It goes without saying that a printer will look at the number of printed images when they prepare a quote for your job. In the case of “The Writing 69th”, I was able to get a price of about 3.3 cents per printed image. (This worked out to about \$5.75 per book, not including the cover.) If I had been a large corporate customer, I would have been able to get a somewhat better price. In general, 3.3 cents per printed image is a very good price.

An American quick printing association called PrintImage International has done surveys about market pricing among its membership. In 2000, PrintImage asked its members what they would charge to produce 10 copies of 500 black & white originals. The response was an average price of \$254.49, or about five cents per image. Another job, 500 copies of 10 black & white originals, resulted in an average price of \$218.87, or 4.3 cents per image.

High-volume quick printers using Xerox DocuTechs reported that their estimated selling price was about 3.5 cents per image.

Pricing will vary from region to region. The amount of competition in your area will also have an impact on pricing. However, if the quoted price per black & white image amounts to more than five cents, I would advise you to find another service provider.

Be sure that you get multiple price quotes from different vendors. In addition, be sure that the equipment for the job is on site. Printers will rarely admit that they can't do a job. However, sometimes they will farm out a job to a subcontractor if they can't do it themselves. When that happens, your price includes the overhead for the pieces that were farmed out. Think of yourself as your book's project manager. You may have to find two different print shops: one for the inside of the book and another for the cover. You may have to pick up and deliver the various components to a bindery specialist. If you do so, you can bring down the overall cost of the project. Keep in mind, though, that you are also taking on a significant responsibility. If you trust your printer, you may be happy paying the extra dollars to have them manage the full job for you.

PrintImage also surveyed its members about color copy prices. The average price to produce 50 color copies of one one-sided original was \$47.62, or 95 cents a copy. In general, color copies do cost around \$1 for an 8½" x 11" page, but your price will depend on how many copies you make. If you only want ten copies, you might spend between \$5 and \$10 per 8½" x 11" copy! It will cost even more to print from a digital file or to print an 11" x 17" page. Most service providers add a charge for printing from a digital file because it is more complex than simply putting down an original on the copier's glass and pressing the copy button.

Color copying can be a very good method for covers, particularly for physical bindings like tape, wire, and plastic comb. In these

cases, you don't have to worry about printing text on the spine. There are, however, some drawbacks to having the cover printed on a color copier. Until recently, the paper used for color copiers was quite limited. Today there are some thick and glossy cover paper stocks that will print on color copiers. However these are generally not quite as thick as comparable cover paper stocks that can be printed on a printing press. In addition, most color copiers cannot handle paper stocks larger than 12" x 18", and even when printing these papers, they can only print an image slightly larger than 11" x 17". This means that color copiers are not the ideal choice for printing the wrap-around cover of an 8½" x 11" perfect-bound book. It is possible to do a cover for a perfect-bound book on a color copier, but if you do so, you should understand the limitations in terms of paper stock and design.

From a design perspective, a cover printed on a 12" x 18" sheet on a color copier cannot have a spine wider than 1" if the book size is 8½" x 11". The designer must also keep the design within the printable area of the copier. This means that text and design elements need to be about one half inch from the edge of the sheet. The printable area also makes it difficult to include the trim and fold marks that make the binder's job easier.

There is one other thing you should know about color copiers. Their print/copy speed is generally much slower when using oversized papers. This may end up being reflected in a higher price if you require an oversized sheet.

There are a couple of alternatives to color copiers if you want to print only a small quantity of covers:

- Offset printing presses
- Automated direct-to-press offset printing presses
- High-speed digital color printers

For the cover of "The Writing 69th", I went to a printer that specialized in short-run color printing using an automated direct-

to-press printing press called the Heidelberg Quickmaster DI. For this type of press, or for any type of offset press, you will get a much better price per cover as the run length goes up (i.e., the more you print). I asked my printer for a quote for 100 four-color⁶⁴ covers. The response: \$400, or about \$4 per cover. I asked what it would cost to print 300 covers and was told it would be \$410, or \$1.37 per cover. Ultimately, I decided to print 500 covers. I planned to use about 100 immediately and then save the rest in case I decided to reprint. This was a gamble, because I might want to change something on the cover for a future printing. However, since my risk amounted to about \$10, I decided it was worth it.

A single-color cover is a less expensive option, although the price per cover will vary greatly depending on the number of covers ordered. A single-color cover suitable for a perfect-bound book will cost about 60 cents per cover for a print run of 150 covers.

Other considerations

For both of my books I have had a couple of things running in my favor in my discussions with printers:

- I created both books in a standard size (8½” x 11”).
- I knew what to expect in the way of competitive pricing.
- I told them I could supply them with a print-ready file format. (In the case of the cover for “The Writing 69th”, I supplied them with a sample design and the components in digital form. They created the final digital file for the cover. For “From Microsoft Word to Print”, I supplied a pasted-up print-out of the cover with all the elements in place.)

However, some aspects of my books have made the printer’s task more difficult:

⁶⁴ Color printers and presses use four colors to simulate a full-color image. These four colors are cyan, magenta, yellow, and black, which are also known by the acronym CMYK or the term “process color”.

- Both books have many photographs and illustrations, which make it more difficult to reproduce than a simple text-only book.
- To preserve the highest quality of the photographs and illustrations, I wanted the job to be printed from a digital file, not copied from a paper original.

Setting expectations

As I mentioned before, one of the key advantages that a publisher has is an ongoing relationship with one or more printers. If the publisher is a good one, this means that they have established business practices for their relationships with their printers. These business practices facilitate the business relationship, improve communication, and let the partners know what to expect from each other.

As an individual, you must set the proper expectations with your printer. Here are some sample guidelines:

- The printer should print the job to the correct specifications⁶⁵ (which must be crystal clear to all parties).
- The printer should print at a suitable quality level (on the right paper and at an agreed-upon quality level based on a proof that you approve).
- The printer should complete the job for an agreed-upon price to be delivered to you at an agreed-upon time.
- If problems come up, the printer will discuss them with you and inform you before proceeding if there will be any extra charges associated with these changes.

You, in turn, also have significant responsibilities:

⁶⁵ Typical book specifications include the type of paper, the use of color, the binding method, the final trim size, and the quantity desired.

- You should clearly communicate the job requirements.
- You should supply the components as promised.
- You should view and approve proofs.
- You should pay on time.

Here are some final pieces of advice:

- Quantity – Smaller quantities will cost more per book. This is particularly true of the color cover, but it also applies to the inside of the book. The fewer the number of images (i.e., books printed times the number of pages), the more likely it is that the print shop will charge you a higher price per image.
- Cost – If cost is the most critical issue, take steps to make your book easy to copy or print. Therefore, create it in a standard size, provide a hard copy original (copying will cost less than printing), and select a simple cover and binding method.
- Communication – Make sure that you have clearly expressed your requirements. Leave nothing to chance.

Could I print at home instead?

If the prices quoted by your local print shops discourage you, you may start to wonder whether you could print the job for less money on your home printer. I wouldn't recommend it, certainly not for lengthy documents, but it really comes down to some very basic issues of convenience and cost. Is it worth the extra time and aggravation to do this part of it yourself?

First of all, a digital print shop is likely to have a black & white printer that is 10 to 30 times as fast as your home printer. The job that will take you days to print could be completed by them in an hour or two. In addition, they purchase supplies and paper in bulk, so their costs are really quite low. The typical inkjet printer that you might have at home is built on the classic razor/razor blade model. Although the purchase price of your home printer is

relatively low, the operating costs are very high. If you start printing a lot of pages you will begin to understand its true cost.

Here's a good experiment. Next time you install an ink cartridge, make note of the number of pages that you are able to print before you have to install another. Then take that number and divide it by the cost of the cartridge. That will give you the per-page cost for the cartridge. With my printer, the black cartridge is separate from the color cartridge. A black cartridge costs around \$25. I estimate that I could print 500 or so black-text-only pages per cartridge. Dividing \$25 by 500 results in a five-cent cost per page. If I add a cent or so for the cost of the paper, my total cost is around six cents (and it would be higher if the pages had items that consumed a lot of ink, like scans, tints, or solids). I would gladly pay a printer the same money to print the job, particularly since they would be able to do it much faster and without any effort on my part.

A couple of other disadvantages may discourage you from printing your book at home:

- Binding – You either have to bind it yourself using a simple method like staples or a three-ring binder, or take it to a print shop that offers a more sophisticated binding method.
- Smearing – The inkjet inks that are used in many home printers are water soluble. If you spill water on the pages, they smear. In addition, areas where a lot of ink is applied get pretty wet. This may cause the paper to buckle.
- Slow graphic printing – If your book has scans or graphics you will have to configure your printer correctly to make the images look good. (Generally, this involves printing at resolutions of

600 dpi or higher and setting the method of halftoning⁶⁶ correctly.) This slows up the printing speed.

I would only recommend printing on a home printer for small quantities of short books. When you are only producing a small number of books, craft bookbinding becomes an interesting option. You can use very simple materials (handmade paper, cloth, wood, ribbons, string, etc.) to create an unusual and attractive method of binding. Most libraries have books describing this topic in greater detail.

If you decide to use a mechanical binding for your book, you might choose to print your covers on your home printer. With a mechanical binding, you simply need front and back covers that measure 8½" x 11. Many home printers have settings that allow you to print on heavier papers. However, you still may run into problems with smeared inks. This problem can be minimized by spraying the finished covers with an artist's fixative.

⁶⁶ Halftoning is the method that is used by printing presses and home printers to simulate continuous-tone images like photographs. Home printers often use a "dither" of little dots to simulate continuous-tone images. The halftone dither of desktop printers may be visible, appearing as little dots that are particularly noticeable in highlight areas. This is particularly true at the printer's low resolution setting.